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TO OUR CONTRIBUTORS

JIE invites articles/papers on the impact of educational research on classroom practices and policy decisions. Specific examples where this impact is apparent may be given.

GENERAL EDITOR

Culture, Education and Creativity

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OF all the abilities that man, as 'homo sapiens', is endowed with, creativity is perhaps the most unique. It is creativity, as a characteristic ability of man, which, among a few more, is very distinctive of him in comparison to other forms of life. Nevertheless, the other distinguishing feature which marks him uniquely from the rest of animal life is what Arieti (1976) aptly names, "man's capacity to indulge in Aristotelian logic". Freud called this latter ability the secondary process cognition. Regarding the former ability, Arieti (1976) writes:

"Creativity is a prerogative of man, can be seen as a humble human counterpart of God's creation. The difference between the creativity of man and creation of God, according to the beliefs of some theologians and religious people, lies in the fact that whereas God's creation comes 'ex-nihilo' that is, from the spatial and temporal nothingness, human creativity is based upon what is already existing and available." (p.2)

Distinguishing human creativity from God's creation, Hallman (1963) had also stated somewhat similarly. According to him, "human creativeness is relational ... man does not create the components, he can, nevertheless, create new connections among them (Gowan et al. 1967, p. 19).

Function of Education

story of man as viewed through temporal spatial media, that is, from the most

primordial man to 'homo sapiens', gives an index of creativity which is uniquely human. The entire human heritage, accumulated in the form of culture and civilization, tells nothing but the story of man's endeavour to create and, thus, add to the already existing thesaurus—the storehouse of knowledge. And yet the fact remains that this change is the result of the efforts of a very small percentage of the potentially creative persons who lived on this planet. Who knows what would have been the picture (perhaps phenomenally different), had all potentially high creatures found chance to express their inherent powers? MacKinnon (1962) describes the story by Mark Twain in which a person wanted to search the greatest of all generals who lived on this earth. He inquired from a number of persons. He was eventually told by St. Peter that he was a cobbler who died. St. Peter further explained to him that had he been a general, he would have been the greatest of all of them. The essence of the story is that many great talents die unknown and unsung. Had their talents been recognised and duly nurtured, they could have achieved wonders. It is, therefore, our task, as psychologists and educators, to discover talent when it is still potential and to provide the kind of social climate and intellectual environment

which facilitates its nurturance and expression. It is only then that education, perhaps, can perform one of its basic functions by increasing production of ideas, processes, and products; and thus gearing up the talents of pupils to the fullest possible extent.

The reality, today, in this country and elsewhere as well is something different. The curricula, the methodologies, and practices in education are so oriented that "the minds of the pupils are still treated like black boxes with informational inputs fed in at one end by the teacher, and the output tested at the other end. And the measure of quality is how well the outputs correspond to the inputs. How many teachers teach with the expectation that they can get more out of a box than they put in?" (Suchman, 1975, p. 90).

Such a state of affairs can, probably, be attributed to our taking a narrower view of 'giftedness' or talentedness. Students who can give best possible response to a problem, in the form of conventionally accepted best outcomes are, unequivocally, treated as highly intelligent, talented or geniuses. Deviations from conventionally accepted norms of responses are not only not valued high but are also often evaluated negatively. At times such students are labelled as eccentric, queer, bizarre or crazy. The uncommon but genius student, if receives such a treatment from the society, either becomes neurotic or turns anti-social. Torrance (1967), in an article, "Creative Personality and Ideal Pupil", establishes through considerable evidence that creative personalities 'tend to be estranged by their teachers and are not liked by them'. Other investigators, too, e.g. Getzels and Jackson (1962), Barron (1957), MacKinnon (1966), etc. are of the same opinion; and point to the fact that teachers prefer students with high IQ but with less outstanding scores on test of creative thinking.

Apart from that educators hold a static and stereotyped view of intelligence (in terms of IQ scores), and adhere to a narrow concept of giftedness, there is yet another reason for this state of

affairs. It is high academic achievement, a school or college level, that society, in general and parents, in particular, desire and appreciate, for the simple reason that they tend to associate high academic achievement with monolucrative job or vocations, which, in turn, they think, can and does provide security and adjustment in later life. In our society most parents desire their wards to have adjustment and security. But one must not forget the truth, as Maslow (1975) asserts, that "Every human being has both sets of forces within him. One set clings to safety and defensiveness out of fear (and anxiety tending to regress, hanging on to the past, afraid to take chance, afraid to jeopardize what he already has, afraid of independence, freedom and separation. The other set of forces impels him forward towards wholeness of self, and uniqueness of self, towards full functioning of all his capacities, towards confidence in the face of the external world, at the same time that he can accept his deepest, real unconscious self" (parenthesis added). Maslow views the latter set of forces as "constituting the healthy growth of an individual, a never-ending series of free choice situations, confronting each individual at every point throughout his life, in which he must choose between safety and growth, dependence and independence ... safety has both anxieties and delights, growth has both anxieties and delights" (Maslow, 1975, p. 109). Some people prefer the anxieties and delights of safety, while others prefer the anxieties and delights of growth. In their preference for security and adjustment some people go crazy, that they develop in themselves what Arieti (1967) would call 'adjustment syndrome'. Such people always tend to fashion their lives in such ways as to avoid any sign of maladjustment and insecurity. Adjustment, security and conformity become a style of life, the be-all and end-all of life. They are simply afraid of entering into anything that is new and unexplored; feel most satisfied and happy while working in a groove. Their area of awareness shrinks, and ultimately, they develop

in them, what may well be called, "security-mania". Eventually, they face a thorough and complete void, meaninglessness, frustration, and anxiety, exactly what they always tended to avoid or escape.

At a stage where higher academic achievement and extreme security consciousness are the very purposes of life, we are confronted with a serious and a broader educational problem. No doubt, by following the path of conformity and commonly accepted best outcomes, academic achievement and productivity can be enhanced, but certainly we shall not create what is 'off-the-beaten-track', new, and unique. The question arises; can it be a desirable goal of education, to sacrifice uniqueness and originality to gain mass productivity and probably (pseudo) adjustment to environment? Rogers (1959) seems to warn us correctly. He says, "unless man can make new and original adaptation to his environment, as rapidly as his science can change the environment, our culture will perish". This educational issue needs immediate consideration and decision.

What do we like our society to be? Do we like a type of society that always tends to seek immediate adjustment in the direction of the right answers, "channelized and controlled" ... where the individual appears to shy away risk and uncertainty of the unknown and seeks safety and security of the already known? (Getzels and Jackson, 1975, p. 109). Or, do we like our society to become of a kind, where individuals can also venture into the unknown and the unexplored? Most likely, a proper conglomeration of the two can be the only desired and sought-after goal of our education. Immediate adjustment, based on the security of the already known is inconceivable as the ultimate goal of life and, hence, of education. The IQ-based concept of genius will therefore not be adequate, if education is to contribute to the enrichment of human heritage of culture and civilization. In order that this may happen, a broader and more comprehensive

view of giftedness which can include divergence and creativity will have to be accepted.

It is now clearly recognized that a frightfully large amount of human potential is being neglected. Such behaviour as originality, leadership ability, foresight, and outstanding performance in non-academic areas cannot simply be evaluated in terms of the IQ-based concept of giftedness. Moreover, the use of IQ as a sole criterion for determining giftedness led to the erroneous conclusion that either one is gifted or one is not. While the fact remains that people may have extremely outstanding abilities in certain area(s) while, in other, they may be only mediocre or even below average. Ramanujan, the great Indian mathematician, could not pass his intermediate examination and failed in all subjects, except mathematics; but later became FRS (Fellow of the Royal Society) of England. One can write about very many such geniuses who were strong in one special area but quite below mark in others.

New Concept of Creativity

Towards the late fifties, with the publication of "The Structure of Intellect Model" (Guilford, 1959), and the studies conducted by him and his colleagues, a new era of research opened. Guilford, through his "model of intellect", made it clear that apart from the IQ-supported theory of giftedness, human mind is capable of divergent productions as well. The ability of divergent production which, if properly nurtured, may lead to creativity in the form of unique and novel products. According to Torrance (1975), Guilford proposed what was virtually tantamount to the periodic table of intellect. In his discussion of thinking as one form of the "operation" of the intellect, he talks of two types of productive thinking—convergent and divergent—which generate new information from known information and remembered information. In divergent thinking operations we think of different directions, sometimes searching, sometimes seeking variety. In convergent thinking, on the other

hand, information leads to one right answer or to a recognized best or conventional answer. But creativity, as Guilford puts it, is a "many splendoured thing". MacKinnon (1962) calls it "a many faceted phenomenon", in the sense that all emotional, intellectual, cultural, and environmental aspects operate to give birth to creative insight. Let us have a brief view of what this concept means to different thinkers.

Orientalist's View of Creativity

A glimpse of the mystical and vitalistic connotation that the concept of creativity is said to be fraught with, can clearly be had in orientalist's viewpoint of creativity, especially Indian. According to Indian philosophical view (Chaudhury, 1975), creativeness of the highest order is effortless and spontaneous; it covers an unpredictable field of human knowledge. In the state of 'samadhi', for example, when the boundaries of ego are washed away, the distinctions of subject and object vanish, the individual is one with or merges in the ultimate reality, the ego (aham) loses its identity and is dissolved in the universal consciousness, the Yogin at this stage enters into intuitive perception, entirely of a different nature. In this state of Yoga where there is complete 'chitta vritti nirodha', that is, cessation of the activities of the mind, extrasensory perceptions occur. Moreover, a change in the modality of consciousness takes place and queer internal perceptions are experienced by the Yogin. This higher order creativity according to Hindu thought, takes place when the cosmic consciousness plays upon the unperturbed individual consciousness. Jung is of the view that creativity is a function of the racial-unconscious. His view somewhat agrees with the Hindu viewpoint.

The Indian viewpoint of creativity given above is not challenged by the investigator. But what is needed is a more workable and behavioural concept of creativity mostly followed in researches in this subject. Agreeing with Arieti (1976), the investigator wants to explicate a kind

of creativity that ordinary human psyche deals with.

Occidentalists' View of Creativity

Bronowski (1958) distinguishes between discovery, invention and creation by saying that Columbus discovered the 'West', Bell invented the 'telephone' and Shakespeare created 'Othello'. According to Bronowski, a fact is discovered, a theory is invented but only a masterpiece is created, for the creation must engage the whole mind. Bronowski's definition, however, is denotative indicating at the same time what Piottowski (1971) would call 'empirical referents' of creative product.

According to Taylor (1975), Morgan analysed twenty-five earlier definitions of creativity and found that in main all these definitions point to the development of some unique product. Spearman (1931) defined it as 'the power of human mind to create new content by transforming relations and thereby generating new correlates'. Gestalt psychologists attempted to define creativity as an action that produces a new idea or insight through imagination rather than through reason or logic. According to McKellar (1957), "creativity is the fusion of perceptions in new ways", while Kubie defines it as "the capacity to find new connections". To Rogers (1961), it is the emergence of novel relationships; to Murray (1959), it is new composition and to Taylor (1975), moulding of experience into new organization. Ghiselin (1952) states creativity as the presentation of constellations of meanings. But Guilford (1962) considers that originality, which is by now said to be a necessary component of creative product, is more closely related to the personality trait of unconventionality than to the quality of newness. That is, he considers originality as a function of temperament instead of objects produced (Taylor 1975).

To Thurstone (1962), in creative act, there is a moment of insight, but before that insight becomes focal there has always preceded a non-verbalized pre-focal thinking. To him, the pre-

focal is followed by explicit and deductive thinking before it attains the status of creative thinking. According to Arieti (1976), creativity is a process that involves a 'magic' synthesis of primary and secondary process cognitions. He calls it a tertiary process. According to associationistic thinker Mednick (1962), in creative act, there occurs an association between the stimuli and responses in such a manner that the elements linked together are not normally linked. That is, SR linkages in such manner seldom occur in most common people, whereas in creative people occurrence of such linkages is more or less a common place. Hebb (1949) uses the term 'serendipity' for such 'happy' combinations. According to Wallach and Kogan (1965), creativity lies in producing more associations and in producing more that are unique.

Stein, Taylor 1975, adding slightly a different dimension as social usefulness, defines creativity as a process which results in novel work that is accepted as tenable, useful or satisfying to a group of people at some point in time. MacKinnon (1975) goes a step further, and attempts to define creativity as a response or an idea that is novel or at the very least, statistically infrequent but hastens to add that novelty or originality, while a necessary aspect of creativity, is not sufficient. It must also, to some extent, be adaptive to or of reality. It must end in solution of a problem, or fit a situation, or accomplish some recognizable goal. Thirdly, "true creativeness involves a sustaining of the original insight, an evaluation and elaboration of it—a developing of it to the full".

The brief survey made here of the various definitions of creativity indicates that different people view creativity in different perspectives. Some define the term as a product with attributes like novelty, originality, etc. while others delineate it as a process which results in a unique product. Whether one conceives of creativity as a process or as a product there appears considerable divergence in them regarding the definition of the concept. The reason for the same may be

man's inadequacy to perceive reality in totality. The nature of the concept seems to be such that it evades a comprehensive and total viewpoint. At this juncture, one is reminded of "Jain" interpretation of reality in Indian thought 'To the question, 'What is reality?' The Jain seers remark 'syad Asti, syad Nasti' or 'syad Asti, Nasti' (May be it is, May be, it is not) or Neti, Neti, i.e., neither this is the end nor that is the end). For them reality is characterized by 'anekatva', i.e., plurality or multisidedness. Attempts at defining 'creativity' appear to be similar to those at defining 'reality' in Jain philosophy. It can be viewed in a large number of perspectives and from different angles. This makes the task of evaluating various definitions of creativity and selecting the relatively more basic one quite difficult.

Necessary Conditions of Creativity

Considering such inherent difficulties in defining the concept of creativity and keeping in view the status of the available data in the form of research evidences, Hallman (1963) mentions some necessary and sufficient conditions of creativity. According to him, these conditions are a basic framework which can encompass relevant data and have predictive value too. When all these conditions are present creativity must, of necessity, result.

It would be worthwhile at this stage to take stock of, what Hallman calls, necessary and sufficient conditions of creativity. This can help us get to the heart of the problem and to understand it better, by developing an insight into the nature of creative process and creative person. Hallman mentions the following five criteria: (1) connectedness; (2) originality; (3) non-rationality; (4) self-actualization; (5) openness.

The criterion of connectedness is (as Bruner, 1962, would put it) a sort of 'combinatorial activity' of the human mind. It involves the category of relations as a principle for explanation. In certain cases of artistic creativity it takes the form of metaphor, where the artist consciously tends

to identify two objects which have only some predicates in common. Regarding the nature of connectedness, Hallman (1963) writes:

"Logically the connectedness comprises relationship which are neither symmetrical nor transitive; that is, newly created wholes are not equal to parts being connected. . the relationship is neither inferential nor causal, it is metaphoric and transformational" (Gowan, et al. 1967, p. 19).

The second essential characteristic of creativity is that the product (idea, object, relationship, etc.) should be original. Any product to be genuinely called original (and hence creative) or to exist as idiographic, non-classifiable object, should contain four qualities, which are: novelty, uniqueness, unpredictability and surprise.

Speaking psychologically, this condition refers to primary processes or the types of mental operations that are supposed to originate the idea. Even those who are not inclined psychoanalytically agree that certain 'unconscious mental operations' are at the heart of the metaphoric function of the mind.

The process is 'non-rational' (as Hallman and others use the term) because the combinatorial activity manifests itself in the form of unconscious mental operations. It neither belongs to the rational mind nor can it be consciously controlled. Non-rationality is not merely a condition of novelty, it is cause. The psychoanalytic thinkers, notably Freud (1927, 1933), Jung (1946); Kris (1952) and Arieti (1976), are of this view.

According to Rogers (1961), 'openness to experience' includes four distinct sets of meanings, which are: sensitivity, tolerance of ambiguity, self-acceptance and spontaneity. Unlike other conditions, it refers not to the process or product but to the potentially creative personality. These conditions also have some relevance for the "press" factors, the environmental conditions that exists external to the person. Stated differently, these sets of meanings refer to acquired traits of the potentially creative person.

To sum up, the concept of creativity lies in making associations that are remote or unusual or original in the sense of being statistically in-

frequent, unpredictable, novel, and unique. Such associations are not causally derivable. That the process is non-rational implies that certain unconscious or pre-conscious mental operations are at play in creative imagination.

Having thus realized the role of creativity in the enrichment of culture, and with the broader conceptualization of giftedness, we cannot afford to anchor education to the IQ-based concept of giftedness. Fuller expression of the innate potentialities of the pupils is, of necessity, to be considered one of the important goals of education. But to successfully achieve the goal what is needed are identification, recognition and nurturance of the creatively gifted children. For all this what is desirable and essential is that parents and teachers should change their attitudes towards pupils who display such divergent behaviours and their idiosyncratic behaviour patterns should be psychologically understood.

Furthermore, for proper nurturance the curriculum-framers, the teachers and the parents should not feel contented in merely accepting the cognitive and emotional divergence of behaviour, rather they should encourage the manifestation of such behaviour. Only that can ensure fuller expression of the inherent powers of students. As a corollary to it we need to allow to the child more freedom in the classroom. The effective implementation of the programme of education for creativity also entails educating the parents and the teachers to enable them to realize the true meaning of cognitive development. In the school setting the methods of teaching and the evaluation procedures need a thorough change and a break away from what is banal and common-place. In teaching-learning, for example, self-exploration and discovery approach should guide the process; in evaluation open-ended questions and discussion should more frequently be used.

But the traditional teachers and most parents, it is afraid, will criticize such a programme. They may apprehend that so much freedom given to the child in the classroom or outside of it will

jeopardize discipline, which consequently may adversely affect learning. But is not such fear ill founded? It seems so because such people conceive of discipline too narrowly. J. Krishnamurthi, the great Indian thinker in education aptly remarks that true discipline does not lie in student receiving instructions (or exhortations) from the teacher silently and attentively; instead, it lies in the "order" that springs from within—the result of internal harmony and integration. It is natural and spontaneous. It is discernible through commotion in the classroom, resulting from self-directed activities of children. The

teacher's role in the classroom is to provide intellectual climate in terms of thought-provoking situations and challenges to the growing minds. His role also lies in motivating them intrinsically. Only then will students become autonomous, and self-propelled thinkers.

This, no doubt, is a challenging task, especially in Indian conditions, where people are anchored to traditions and inhibitions of various sorts. But if we are to be counted as producers of knowledge (instead of being merely consumers of it), we are left with no alternative but to accept the challenge.

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Simulation: A Realistic Technique in Teacher Education

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“MAKING pre-service and in-service training more realistic is a time-honoured aspiration of those engaged in the preparation and continuing education of classroom teachers”, writes Donald R. Cruickshank (1966). The traditional techniques applied in this regard have met with some success, but are still far from criticisms. Currently, a new technique—Simulation—is being used to meet the criterion of realism as well as to provide a setting wherein trainees may practice “a wide range of teaching behaviour, without fear of censure or failure” (Cruickshank, 1966).

What is Simulation?

Webster’s New International Dictionary gives the meaning of Simulation as “giving the appearance or effect of; to have characteristics of”. And, the International Dictionary of Education defines the term as “teaching technique used particularly in management education and training in which a real life situation and values are simulated by substitutes displaying similar characteristics”. It also means “Techniques in teacher education in which students act out or role-play teaching situations in an attempt to make theory more practically oriented and realistic”.

To Fritz (1965), “simulation may be considered as a dynamic implementation of a model representing a physical or a mathematical system” Cruickshank (1966) defines it as the creation of realistic games to be played by participants in order to provide them with life-like problem-solving experiences related to their present or future work”. Such game situations require each player to make decisions based upon previous training and available information. And Wynn (1964) regards simulation “as an accurate representation of realistic situation, in this case a school system”.

In simple words, simulation may also be defined as role-playing in which the process of teaching is enacted artificially and an effort is made to practice some important skills of communication through this. Herein, the student-teachers and the students simulate a particular role and try to develop an identity with the actual classroom environment. Thus the whole teaching programme becomes a training in role-perception and role-playing. Simulation is the basis of sensitivity training, sociodrama, role-playing and psychodrama.

In the world of science and technology simulation is almost a must. Engineers build models,

study their performance, make some adjustments and build a prototype. Production models are made and developed after repeating the above process. Production models are also studied under conditions of actual performance. Simulated war games are too well-known.

Fattu (1966) observes that simulation can be a significant break-through for the improvement of educational practice and that modelling and simulation have long been used to further applied research in physical sciences. Simulation, therefore, can effectively be used in educational research and its development.

Why Simulation?

A reasonable question posed is: What has simulation to offer aside from realism? The following results have been reported in some important studies of simulation.

Kersh (1965) found that students who underwent simulation training were ready to assume full responsibility during student-teaching up to three weeks earlier than a control group not having such training.

Vecsek found that simulation increases participants' confidence in their ability to teach.

Weinberger reported that participants felt their behaviour on the job was modified positively as a result of the simulation experience.

Wynn (1964) described the use of simulation for administrative positions with positive attitude.

The Michigan-Ohio Regional Laboratory (MOREL) has taken a position that social skills-training can be implemented by simulation.

According to Stone and Morris (1972), "Simulation technique for all their artificiality can often be preferable to putting students in the classroom to learn on their own or to lecturing to them about the classroom."

Points for Simulation

Herman, as reported by Bushnell (1962), has listed five points for simulation:

1. *Identity Simulation* in which the actual system is used as model.
2. *Replication Simulation* in which an operational model of the system in its normal environment is used.
3. *Laboratory Simulation* wherein replication is attempted in the laboratory, with features of the real system represented.
4. *Computer Simulation* is more abstract representation of the real system.
5. *Analytical Simulation* uses mathematical models and attempts to obtain a solution by analytical means.

Many variations are possible in the use of simulation, as in any instructional methods.

Steps for Simulation

Flanders (1970) recommends the following steps for simulation:

1. Letters, A, B, C, D, etc. are assigned to each person in the group and role assignments are rotated by letters so that each individual has a chance to be an actor or observer.
2. The skills to be practised are discussed and topics of conversation that fit the skills are also suggested.
3. Consideration as to who will start the conversation, who will intervene, who will stop the interaction and when it will be stopped are decided.
4. The procedure of evaluation, the kind of data to be recorded, the method of recording, etc. are decided.
5. First practice-session is conducted and the actor is provided with feedback on his performance. If necessary, the procedure of the second session is altered in order to improve the training procedure.
6. If need arises, one should be prepared to change the procedure and the topic and move on to the next skill so as to present a meaningful challenge to each actor to keep his interest as high as possible.

Cruikshank (1968) developed a teacher-training system which is capable of presenting a student with up to thirty-one different simulated problems related to teaching. The following are the various steps suggested by him:

The participant:

1. is introduced into the situation;
2. is provided with information and opportunities to solve the problems of a beginning teacher;
3. is exposed to a variety of potential solutions to a particular problem;
4. is given the opportunity to observe the results of his chosen line of action;
5. is introduced to the situation by film strips;
6. is also given the materials that a teacher going to the school would actually receive—things such as the school rules and regulations, curriculum handbook, and record cards of the students in the class;
7. is presented with 31 problems—ten in films and others in role-playing situations, written incidents or combinations;
8. responds to an incident on a respond sheet;
9. identifies the factors influencing the problem, locates the relevant information, suggests an appropriate and alternative, course of action, communicates and implements a decision.

Afterwards, small group discussions follow which consider the analysis and the action taken and then come large group discussions. The objective of the discussion is to push the analysis of the teaching problem, and not to come up with the right answer. Rather, each participant is encouraged to employ a sequence of information processing suggested by Ryans (1963) in order to arrive at his own unique decision.

Simulated Social Training Skill

Flanders (1970) has suggested the following problems pertaining to Simulated Social Skill Training (SSST):

1. The ability to ask open or closed question at the appropriate time.
2. The ability to ask a question which lifts the current level of abstraction or a question which lowers it.
3. The ability to ask questions from the areas in which concepts and logical connections have been expressed by the students previously.
4. The ability to summarize what the students have said previously.
5. The ability to ask a question which may move the discussion to the next step in a logical sequence of problem-solving.
6. The ability to make appropriate use of the ideas expressed previously by the students.
7. The ability to make constructive use of the positive and negative feelings of the students.
8. The ability to predict the consequences which follow alternative actions.
9. The ability to provide reasons for using 'praise' or 'blame'.
10. The ability to assist pupils to compare the consequences of alternative actions through specialisation before decisions are arrived at.
11. The ability to guide constructive discussions.
12. The ability to clarify the first step needed to start work in ways that are in accordance with the interests and abilities of the pupils.
13. The ability to organize pupils' ideas in terms of teaching objectives for reinforcing, selectively, those ideas which are in target.
14. The ability both to demonstrate and explain rules of logic in classroom discourse.
15. The ability to assist pupils to maintain consistency in the meaning of words and to assist them to distinguish matters of facts, opinions and values.

Capabilities of Simulation

On the basis of the above discussion, let us now consider the capabilities and limitations of simulation as a method of instruction in the preparation of student-teachers or in-service teachers or even administrators and other educational specialists.

1. The evident face validity of the situation simulates interest and motivation in learning and encourages the subject to behave as he might go in reality. Subjects report a high degree of involvement.
2. The written record of performances results in the accumulation of normative data and permits clinical examination and comparison of on-the-job behaviour in identical situations.
3. Simulation permits the learner to profit from the mistakes that might be disastrous on the job.
4. The instructor, in the simulated situation, can provide the subject with concepts, research evidence, models, or other information which he cannot always send in during the actual game. In fact, theory and practice may be more relevantly and visibly joined in simulation than in more conventional teaching methods.
5. Simulation provides an opportunity to see the whole picture, to view each problem in a broad context.
6. Simulation permits a degree of introspection rarely provided on the real job. Simulation holds up the mirror, so to speak. Student-teachers can look at themselves more self-consciously, more deliberately, more leisurely and more objectively than is possible when 'the chips are down'.
7. Simulation presents an extremely useful research medium, permitting the collection of normative and comparative data on behaviour and performance in identical situations.

In addition to the above, one might add that:

1. Participants consider the simulation situation stimulating and highly motivating.
2. Simulation allows the participants to encounter and play out instructional problems much earlier than they normally would be encountered with and in a much shorter time.
3. Simulation allows the participants opportunity, without fear or reproof, for unfettered practice of principles he has learned in education courses.
4. Participants become acquainted with school records, regulations and children in meaningful ways.
5. Participants encounter teaching problems and engage in problem-solving activities which may reduce the intensity or number of problems they will face in real classroom situations.
6. Another noteworthy advantage of simulation is that it brings the classroom to the students. With the increasing shortage of available space for participants and student-teachers, simulation may well fill an important void.

Trying to evaluate the concept a little more, its merits can still be enumerated as under:

1. Simulation is next to real things with a major advantage that the decision-makers (learners) may become aware of the consequences of their decisions without suffering the real consequences.
2. Simulation compresses time and with it also goes a compression of experience for the learner. He can be exposed to many more experiences in a brief period, and just as it is less tiring to think out a problem rather than to manipulate all objects and sequences that will solve the problem, this approach is quite useful in early training exercises and for the purpose of introducing a new strategy.
3. It is useful as the total performance time is less than fifteen minutes and a larger

number of students can be accommodated daily by limited video equipment or limited number of supervisors.

To support it, Fattu (1966) gives the following reasons for the use of simulation:

1. When an environment cannot be duplicated exactly, then it may be made as realistic as possible.
2. When a process is to be examined systematically, it may yield information through developing and operating a situation
3. When a system is too difficult to manage, simulation may suggest a way of breaking it down into sub-systems. Then it may be noted how the skills and the information required may be pooled.
4. When a difficult problem is confronted beyond a teacher's ability, simulation may help him synthesize and infer a good solution.
5. Cost may be reduced by simulating rather than by alternative forms of experimenting.
6. Simulation may also indicate which variables in a complex operation or system are important and how they are related to each other.
7. The amount of time accomplished is controllable by the simulator.

8. Unforeseen problems arising from the introduction of innovations may be identified by simulation and risk is minimized

Limitations of Simulation

Like any instructional methods, simulation has its limitations. To begin with, "it depends heavily upon the competence of the instructor using it. Considerable uninterrupted time is needed for full comprehension of the background materials", Wynn (1964). Then, there is the serious question of transferability of learning from the simulated situation to others. The more specific the case at hand, the greater are the hazards of generalization and transfer.

In any case, simulation adds to the new technology available for improving the pre-service and in-service education of teachers. "It may be that 'interrogative stem' we have sought so long which will wed theory and practice", (Cruikshank, 1966). And, Wittrock (1964) could very well be right when he says. "Classroom simulation will probably produce a major improvement in the education of elementary and secondary school teachers by accomplishing an increase in transfer of training and by providing a defensible measure of effectiveness of teacher education courses".

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Values and Value-oriented Education

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As part of the cultural system, values are conceptions of what ought to be. They are rules, guidelines for behaviour. They are the abstract goals which people seek to achieve.

A series of distinctions can be made to indicate the main categories of things to which the noun 'values' has been applied.

DISTINCTION I: *Values as attributes of people or attributes of objects.* Social scientists are in the habit of talking about people as "having values" in the sense of standards or tendencies of choice, located in the minds of men. Values in this sense are a kind of attitude. Still others consider values as a kind of object in themselves. Values are considered as absolutes, existing in the mind of God as eternal ideas, as independent validities, etc.

There are clearly two things involved in any discussion of values; the objects which are valued and the tendency or standard within the person to behave in certain ways towards these objects. In other words, there are "valued objects or attributes" and there are "value-standards" of people. Neither is understandable without reference to the other.

DISTINCTION II: *Values as attributes of individuals or of collectives.* Some social scientists speak of the values of an individual, others prefer to restrict the term to those standards which are "shared" within a group or at least held by an

effective majority. It is most convenient to study individual values to see how value-shaping institutions (schools, churches, psychiatric institutions, communications media, etc.) influence people.

DISTINCTION III: *Values as conscious and verbalized standards of the individual or as inferential constructs made by the research from observed behaviour.* According to Clyde Kluckhohn, an anthropologist, a value is a conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable, which influences the selection from available modes, means and ends of action. A conception identifies values as a logical construct comparable to culture or social structure. Values, like culture, are not directly observable. Both values and culture are based upon what is said and done by individuals but represent inferences and abstractions from the immediate sense-data. To identify value as a "conception" requires that someone holds the conception. Kluckhohn insists that the value-standard be 'verbalizable' in some general, abstract terms, understandable to the subject.

DISTINCTION IV: *Values as desires or as obligations.* Values are frequently identified with preferences, desires, motives or interests. This broad definition embracing all preferences and desires ignores a distinction between the feeling of liking and the feeling of obligation, i.e. between "I want

to" and "I ought to" Florence Kluckhohn expresses this somewhat awkwardly. A value is not just a preference but a preference which is felt and/or considered to be justified "morally" or by reasoning. Even if a value remains implicit, behaviour with reference to this conception indicates an undertone of the desirable—not just the desired. The desirable is what it is felt or thought proper to want.

DISTINCTION V *Values as a few basic general standards or tendencies of choice, or as all specific preferences or standards.* Another approach is to distinguish 'basic values' from the myriad specific wants, preferences, norms. The basic values are assumed to be a relatively small number of general principles or tendencies which underlie the specific verbal or behavioural indicators and are relatively stable. In their major study, "Variations in Value Orientations", Florence Kluckhohn and Fred Strodtbeck give their formal definition. Value orientations are complex but definitely patterned principles, resulting from the transactional interplay of three analytically distinguishable elements of the evaluative process—the cognitive, the affective and the directive elements—which give order and direction to the ever-flowing stream of human acts and thoughts as these relate to the solution of common human problems (F. Kluckhohn and F. Strodtbeck, 1961).

Behaviour is facilitated or limited by situational factors. With a given situation, people will behave differently according to their factual beliefs about the situation and their values. Factual beliefs and values are considered to be influenced by three categories of intellectual and emotional factors; capacity for critical thinking, emotional sensitivity and philosophical commitments.

Man organizes his day-to-day interaction with his natural environment by means of technological systems, his relationships with his fellow men by means of social systems. By his religious systems he explains the fundamental nature of the universe and his own place within

it. Social values grow out of social interaction and become part of the group culture. Values are transmitted from generation to generation through formal and informal agencies of socialization. The values are thus a vital force for agreement or disagreement in any society. As stated by Robert C. Augell, "Moral integration in any group is the degree to which there is a set of common ends and values towards which all the members are oriented and in terms of which the life of the group is organized" (Augell, *The Moral Integration of American Cities*)

Moral Development through Education

L. Kohlberg and other developmentalists have argued that development should be the central aim for education. Development is of two kinds:

- (a) Vertical development—aimed towards more comprehensive, more consistent and more integrated stages of logical and moral functioning.
- (b) Horizontal development—aimed towards the application of one's highest stage to an ever-widening realm of one's life-experience.

In his paper, 'Goals in the teaching of Ethics', Daniel Callahan, Director of the Institute of Society, Ethics and Life Sciences, New York, points out the acceptable goals for teaching of ethical values

- (a) To stimulate the moral imagination.
- (b) To provide ability to recognise ethical issues
- (c) To develop analytical skills.
- (d) To elicit a sense of moral obligation.
- (e) To promote the tolerance of ambiguity and disagreement.

Inculcating Human Values through Value-oriented Education

Keeping the above goals or objectives in view, the academic programme should make the

living experience of values possible. This can be done in the following ways:

1. *Conducting a democratic classroom:*
By allowing students to participate in decisions related to the curriculum, methods of instruction and evaluation.
2. *Democratizing the wider school programme.*
By giving students opportunities to share their decisions in wider school perspectives, e.g. policy-making.
3. *Developing awareness for real-life problems in the wider community*
By providing opportunities for students to step into roles of social responsibility, e.g. community-work, social welfare work, etc. A field experience, in the form of practicum, guarantees an interplay between ethical theory and the practice of morality.

As a pedagogical discipline, value-oriented education should develop principled moral thinking, i.e. moral judgements which appeal to normative principles with institutional and social norms. This could be attained through exposure to moral problems and through exposure to the reasoning of individuals whose thought-process is higher than one's own.

Religion is the model which man uses to explain the reality of things and which also pro-

vides him with the values, norms and ideals to choose a course of action. The course-content in value-oriented education, therefore, should contain the ethical teachings of the religions which would include the life-history of religious leaders and reformers and the morals from mythological stories in earlier stages.

In order to test the development of moral skills and abilities, we may refer to James Rest's Defining Issues Test (DIT), which is designed to measure the ways in which subjects identify "the important issues of moral dilemmas". In order to test their moral judgements, subjects are asked to read hypothetical, moral dilemmas and select from a series of statements the possible moral issues raised by the cases. Subjects then rank the issue statements in terms of a scale of perceived importance which is interpreted by Rest as a mode for evaluating the moral development.

A society's culture is expressed in many forms—in its literature, art, architecture, dress, food and modes of entertainment—but its language and education are central to its identity and survival. Education's prime task is to conserve and protect an inherited culture and transmit the same to each new generation. The value-oriented education can help make this possible.

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Non-verbal Communication in the Classroom

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GAGE (1963), while defining teaching, writes: "By teaching, we mean... any interpersonal influence aimed at changing the ways in which other persons can or will behave". Amidon and Hunter (1967) have described the teaching process as an intermediate process between teacher and taught and have written that "Teaching is... an interactive process, primarily involving classroom talk, which takes place between teacher and pupils and secures during certain definable activities". Joyce and Weil (1972) defined teaching "as a process by which teacher and students create a shared environment including sets of values and beliefs (agreement about what is improvement) which in turn color their view of reality".

On the basis of the above definitions it can be said that teaching is an interaction between the teacher and the students, creating an environment which will facilitate the learning of the students. In fact this interaction not only influences the students but also the teacher. But the purpose of creating this interaction is primarily for the learning of the students. The teacher is an agent to create, direct and facilitate this interaction.

Components of Teaching

Teaching is a complex activity directed by a complex agent—the teacher, to change the behaviour of a complex organism—the student, and in a complex environment—the classroom. This complex activity of teaching involves a large number of teacher behaviours. These teacher behaviours are so closely interwoven with each other, that it is a difficult task to separate one behaviour from the other. According to Allen (1966), teaching consists of acts or behaviours. This complex act of teaching can be broken down into simpler components, making the learning task more manageable. The classroom communication between the teacher and the students can be categorized broadly into two: (i) verbal communication, and (ii) non-verbal communication. The influence of verbal behaviours is mostly audible, while non-verbal behaviours have a vision-based impact on the listener.

Non-verbal Communication

Like other animals, man communicates by his actions as well as noises. Language is obviously

essential for him but it is not the whole story of human communication. Non-verbal communication has a separate impact on, as well as support to, verbal communication. Verbal communication without bodily actions does not convey full meaning. Establishing rapport with others through smiling, touching, making noise and moving the body is the most primitive form of communication. But it cannot be said, that non-verbal communication is sufficient to convey the message without verbal communication. Again, it is not possible to speak by verbal means alone. From physical characteristics, facial expressions, locations of the body, voices, gestures, pauses, rapidity of speech and any sound other than words of the speaker, some meaning is generated. The non-verbal aspects of speech contribute to the meanings generated from what is said. Children begin learning before their linguistic development. Most of the norms are communicated to the child non-verbally. At any particular time, in any particular culture, there is an expected action to communicate. Edward T. Hall, an anthropologist, has studied the special relations that seem appropriate in various kinds of interactions. In one's own culture these special non-verbal signals are perfectly understood.

Actions of the eyes are an important channel of non-verbal communication. Eye contact has an important role in regulating conversational interactions. Eye signals vary, depending upon what the people are talking about and what the personal relation is between them. Other interesting kind of communication occurs by means of gestures. A gesture is an expression, motion or action usually made with the hands and the arms, but also with the head or even the whole body gestures can occur without any speech at all. The gestures may be spontaneous or ritualized. Ritualized gestures are bow, smile, wink, pointed finger, and so on. These are substitutes for the verbal meaning that are associated with them. There are, however, many spontaneous gestures and actions that are unconscious, but

communicate a great deal. There is another important way of non-verbal communication, i.e. vocal but not verbal. Rapid and highly inflected speech usually communicates excitement, extremely distinct speech usually communicates anger, very loud speech communicates pomposity, and a slow monotone usually communicates boredom. The emotional clues that are provided by the way a person talks are extremely subtle. The pronunciation of a person also conveys a great deal about him. One of the significant signals is ungrammatical pause which is vocal but non-verbal. In a careful speech most of the pauses are grammatically delivered. By calling them grammatical pauses, it is implied that they are normal part of the verbal message. The ungrammatical pauses are regarded as the places where the speaker is searching for words and is planning how to continue his utterance. For a linguistic person the grammatical pauses are most interesting, since it reveals something about the structure of verbal communication. For a psychologist, however, the ungrammatical pauses are interesting because they reveal something about the thinking process of the speaker. Ungrammatical pausing is a reliable signal of spontaneity in speech.

Categories of Non-verbal Communication

The various categories of non-verbal communication are explained by Knapp (1978). These categories are given below.

Body Motion

The first general category is that of body motion, which includes such behaviours as movement of the body, the arms, the hands, the legs, the feet, all gestures, facial expressions, postures, and activity of the eyes. This category includes emblems which have a relatively direct verbal translation, for example, holding a finger to the lips to indicate the need for silence. Illustrators are another sub-category of body movements that are used to illustrate or add meaning to

words. Regulators help the person to control the interaction process

Physical Characteristics

Another major category of non-verbal behaviours involves physical characteristics. Some of them, such as the size and shape of the body, may be relatively out of control but communicate in some ways.

Touching

Touching includes hitting, pushing, stroking or just placing a hand or fingers on another person

Use of Voice

The final category of non-verbal behaviours deals with the use of voice other than to form actual words. Some people call it para-language. Para-language includes use of tone of voice to communicate emotions. It also includes vocalization such as laughing, crying, sighing, yawning, clearing the throat, groaning, screaming, raising or lowering the pitch or loudness of voice. Extended silence may be included in this category.

Non-verbal Teacher Behaviours

According to Gage (1963), teacher behaviour is the "voice" and "motion of a human being". He said that non-verbal and verbal activities of a teacher constitute behaviour. Many classroom phenomena serve as non-verbal communications. These phenomena have an impact on the course and direction of classroom activities. In any classroom, the extent and duration of teacher-pupil contacts are great. It is vital to have mutual understanding in the exchange of the messages that are non-verbal in character. The typical non-verbal phenomena of a classroom are:

1. *Use of Space:* Classrooms are divided into territories. Both the teacher and the stu-

dents occupy space. Some arrangements are more imaginative and some are traditional. Some uses of space are fluid, others are static.

2. *Teacher Travel:* To move forward or away from the students signifies relationships. All of these movements have meaning that the students recognize.
3. *Use of Time:* How the teachers use their time indicates the value and importance they place on the types of work, on the subject areas and on the acceptable activities.
4. *Control Maneuvers* The teacher uses various non-verbal tactics to control the behaviour of the students. These silent expressions seem as events reminding the students of the teacher expectations. Some of the typical maneuvers are—placing finger on the lips, scanning of the room to see who is not working, recording in grade book while the student is making a report. Positive maneuvers are meant for giving encouragement, helping the child to overcome fears, putting the nervous child at ease or resolving a tense situation.

To establish a good rapport with the students in a classroom, the teacher must be careful to avoid incongruity. This is an event where there is a contradiction between what is said and what is done. Incongruous behaviours occur frequently during the times of praise or encouragement. The teacher's approach to an activity provides excellent motivation or through meeting a child's eyes or with a small gesture, the teacher builds confidence. Such non-verbal events are highly conducive to good classroom climate.

Non-verbal qualities that contribute to an effective classroom interaction are:

1. *Attention:* The event of listening to the pupils when they talk is essential. When the teacher fails to listen to the pupil's

talk, the pupil is likely to believe that what he says is not significant.

2. *Reception:* Reception is the listening of the pupil's talk by the teacher, by maintaining the eye contact. The event of attending the pupils when they talk, assures and encourages them to believe that their verbal communication is valued by the teacher.
3. *Reinforcement:* Not only the timid but also the seemingly forward child may need non-verbal reinforcement along with verbal reinforcement to go ahead on his own.
4. *Facilitation:* Facilitation is a movement toward a student for the purpose of helping or assisting him. The teachers quite often detect the needs or unexpressed feelings of the students, and initiate a move toward them to alleviate their concern. The teachers are engaged in such events because, either consciously or sub-consciously, they have become sensitive to the non-verbal cues given by their students.

It is recognized that the expressive cues are fleeting and transitory. They transmit emotion and feeling, and are detected as indications of meaning for more quick speech. Therefore, they are particularly important in creating a good classroom environment and in working out a good rapport with each child.

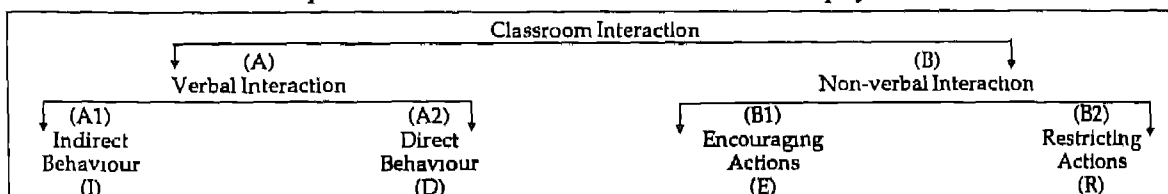
Researches on Teachers' Non-verbal Behaviours

Galloway has developed non-verbal communication categories by incorporating Flanders' ten-category system. This system is the combination of both verbal and non-verbal classroom communication which is presented below:

Thus, Galloway has involved the IDER system of classroom observation. This system includes ten categories (FIAS) for verbal interaction and ten categories (Galloway) for non-verbal interaction.

French (1968), in his study concluded that non-verbal behaviour data provide descriptions of classroom activities which facilitate analysis of communication events and teacher influence. Landon (1975) points towards the implication of his study that the teachers should be trained to become more sensitive to the verbal and non-verbal behaviour of individuals whose cultural and ethnic background is different.

Cosper (1970) compared sex differences in teacher-student interaction and found that female teachers of fifth grade and sixth grade gifted students initiated significantly more with male than with female students, female teachers tended to exhibit more restricting non-verbal behaviour towards female than towards male students; and female teachers exhibited more encouraging than restricting non-verbal behaviour cues towards both male and female students. Shepard (1971) found that more non-verbal behaviours were directed to boys than to girls and female teachers exhibited a greater percentage of encouraging behaviours to the upper social class than did male teachers. Fowler (1972) found that female elementary and secondary teachers were significantly more restricting non-verbally in their adult basic education classes than in their regular public school classroom. Crump (1974) inferred that male teachers were significantly more encouraging non-verbally towards female than towards male students. Female teachers were more encouraging non-verbally towards female than towards male students. Rankin (1975) in a area of physical education found that



female teachers used gestures more than their male counterparts. Dean (1976) found no significant difference between the non-verbal behaviours of male and female prospective secondary teachers. Twa (1979) found that male teachers had a significantly higher level of confusion than female teachers. Jain (1983) found that male and female language teachers and male and female social studies teachers differ significantly with regard to non-verbal behaviour ratios (E/R ratio), but male and female science teachers do not differ with regard to non-verbal behaviours.

The relationship of age and teaching experience with non-verbal teaching behaviours has also been studied. Shepard (1971) found that experienced teachers exhibited a greater percentage of encouraging behaviour to the upper social class than did inexperienced teachers; and inexperienced teachers were more restricting in their non-verbal behaviour than were experienced teachers. Zamora (1974) found that teachers with more teaching experience showed more use of 'positive touch' and less use of 'void behaviour'.

A few studies have been conducted on the relationship between different non-verbal teaching behaviours. Brochtrup (1974) explored significant correlation between (i) mouth movement and head movement, (ii) mouth movement and vocal quality, (iii) head movement and haptics, (iv) proxemics and haptics. Philips (1975) found significant relationship between scores on PONS (Profile of Non-verbal Sensitivity) and non-verbal behaviour. Willet (1976) found five factors describing non-verbal activity which were pleasantness, responsiveness, dominance,

importance and autonomy. Williams (1977) studied the effects of non-verbal communication in classroom climate and concluded that eye contact was perceived as threatening and embarrassing due to established associations with the intent of teachers' gaze, and facility was not desired while proximity was perceived as showing interest in student welfare. Rosen (1978) concluded that the use of two teaching procedures (techniques of modeling and instruction) was found to be a highly effective method for teaching non-verbal empathy behaviours, i.e., eye contact, body orientation and forward lean.

An Overview

In a classroom teaching-learning process, the teacher is the only responsible agent to create a suitable environment for facilitating the learning of the students. The teacher's verbal and non-verbal behaviours are equally important to develop the motivational level of the students, to explain the subject matter, and to reinforce the students' behaviour in the classroom. But there is a gap between what is required in the classroom and what is the focus of emphasis in teacher training institutions. Very less emphasis is generally given to modify the non-verbal behaviours of the teacher. Thus, in this regard, there is a need to identify desirable non-verbal behaviours/teaching skills for the teaching of a particular subject at a grade level. Hence, educational researchers and practitioners are required to conduct researches to find out non-verbal teaching skills and to implement them for the practice of student-teachers.

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Promotion of the Reading Habit

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WHILE efforts have been made at various levels, with varying emphasis and strategies, to promote the book, very little has been done to promote the reading habit. Logically, promotion of the reading habit should have been assigned a higher priority as with the promotion of the reading habit, the promotion of the book would have been more or less automatic. But the promotion of the book, in general, and the promotion of particular individual books brings in identifiable returns to the investors (publishers in this case) which may not be the case with the promotion of the reading habit.

In this country, any venture which does not result in quick, identifiable returns is the responsibility of the government or *sarkar* as it is more commonly known, at least in this part of the country. We are yet to realize that *sarkar* and *sarkari paisa* are also ours, and we, as citizens, have as much, if not more, at stake than the 'anonymous' government. This is one of the most unfortunate legacies of the foreign rule when the government was a totally separate identity, alien to the masses.

However, to revert to the topic, the reading habit, if inculcated, nurtured and promoted at the young, impressionable age of the child, can go a long way in removing a number of barriers to the development of a good, cultured citizen and providing solutions to many other evils which loom large today.

Children's literature is nothing new to this country. *Panchtantra* is the world's oldest collection of stories for children. Even before we had the oral tradition of narrating stories, these 'speaking books' are fast fading into oblivion. The 'Phads' of Rajasthan, Bengal, 'Burakathas' of Andhra Pradesh, 'Kathakali' of Kerala are symbolic of a rich genre of oral narration. While our handicrafts and textiles which depict the art and culture of India and are greatly valued over the world, have been revived and preserved thanks to geniuses like Pupal Jayakar, we have done nothing to even preserve the tradition of narration and story telling which could have given a boost to children's literature and books. The technological break

video and TV can certainly be utilized for this preservation and even revival. Cable Television, centralized computer hook-ups, narrow-casting, etc. are all moving towards presenting audio-visual books, in the coziness of one's house, with the additional advantage of remote control. Are we completing a full circle, to return to 'listening' to books? Perhaps not, for the print medium is very powerful and will remain so. Was it not Gutenberg who said, "With twenty-six soldiers of lead, I will conquer the world".

The 1981 Census recorded the country's population as 683,810,051¹ and the percentage of literacy as 36.17. Twenty per cent of this population is in the age-group 6-14, i.e. the age-group of school-going children². This is our target group who have to be motivated to read.

How often do we take children for granted and try to shape their character, life-style, environment, and even their clothes and habits according to our limited ability, conveniently forgetting our own childhood? Today's child refuses to accept anything, least of all education, as a gift. The sooner we realize this, the better it would be for us and for the child. Not only have values undergone a change, the system, the way of living, the environment, almost everything has changed. Today's child shares the newspapers with the parents, he watches the TV with us and is generally aware of what is happening around him, not within the family only but also outside. What is more important, he acquires the ability to analyse, at a much younger age than his parents were able to do so, thanks to the rapid technological development and his exposure to it. Because of these and many other factors, which could be more competently explained by a psychologist than a mere publisher or printer, the book faces a stiff competition. The competition is not going to soften in the years to come; it would become stiffer. If we have to promote the book, we will have to redefine and remodel our strategies for the book in its entirety. Far too long,

we have played the same tune, at seminar after seminar, finding scapegoats for our inherent inabilities to promote the book, be it the book for children or the book for the adults or the book for the neo-literates. Poor reading habits, low purchasing capacity, curricular load on children, apathy of parents, lack of cooperation from teachers, high costs of paper and printing, paucity of authors and illustrators and threat of TV, have been extensively cited as the reasons for the unsatisfactory state of children's book publishing in this country. Any or all the above reasons are not valid but the question is: What have we done to overcome these problems? Nothing, except for sporadic and isolated efforts.

Let us take a look at the table below which gives comparative figures about the number of children's books produced in a year in India and some other countries:

No. of Children's Books Produced in One Year				
Sl No.	Country	Year	No of Books	No. of Copies (000)
1.	USSR	1980	3,397*	498,211*
2.	USA	1978	2,911	105,700
3.	UK	1980	2,895	—
4.	Korea, Republic of	1980	2,822	5,937
5.	China	1980	2,446*	554,960
6.	Japan	1980	2,312**	—
7.	Germany, Federal Republic of	1980	1,897	—
8.	Netherlands	1980	1,649	—
9.	Spain	1979	1,196	19,001
10.	India	1980	482**	—

* Includes 'Pamphlets' as defined by UNESCO

** All first editions

Source: UNESCO Statistical Year Book 1982

Two remarkable conclusions emerge from the above data. First, the TV and other technological media do not affect the production of children's books, as the USA, which provides round-the-clock TV programme on several channels, also

¹ Census of India 1981—Series 1, Paper of 1981, Registrar-General & Census Commissioner of India.

² Fourth All-India Educational Survey, NCERT.

produces the second largest number of children's books in the world. In 1980, America had 192 million TV receivers with a distribution ratio of 314 per 1000 inhabitants, compared to Asia's 88 million and 54 per 1000 inhabitants, respectively. Second, India ranks tenth in the world in the production of children's books but the gap between the ninth country (Spain) and India is very wide. Even if we include reprints, India's total production will lag far behind.

In sharp contrast, India produces the largest number of films (714), followed by Japan (331), USA (248), France (174), Italy (146), Hong Kong (136) and Thailand (110)³ 'Thus, the economic conditions and the high cost of producing films are certainly not the deterrent factors as far as film production is concerned. Why then should they affect the production of books?

The confusion mounts as we look at some more data. The National Book Trust conducts surveys on reading habits from time to time. One such survey was conducted at the Children's Book Festival, held at New Delhi from 14-23 November 1982. The preliminary analysis of the data collected from 2540 respondents at this survey shows that.

I. Children prefer books in the following order:

- (i) Comics
- (ii) Adventure Stories
- (iii) General Knowledge
- (iv) Sports
- (v) About India
- (vi) Science Books
- (vii) Folk Tales
- (viii) Fiction
- (ix) About Other Countries
- (x) Science Fiction
- (xi) Biographies
- (xii) Mythological Stories

II. Out of 2540 children who were surveyed,

- (i) 160 children read up to two books in a month

- (ii) 650 children read between three and five books in a month
- (iii) 1730 children read more than 30 books in a month

III. Children's sources of procuring books are:

- (i) Libraries
- (ii) Buying
- (iii) Borrowing

IV. The factors influencing children in selecting books are:

- (i) Easier Language
- (ii) Subject
- (iii) Illustrations
- (iv) Low Cost

V. Of all the children surveyed,

- (i) 2172 children selected books for themselves
- (ii) 253 children depended on their parents for the selection of books
- (iii) 93 children depended on their teachers for the selection of books.

This survey has amply proved that we have not understood today's child, that our entire approach towards him is illogical, and that we really do not know what to publish.

Poor reading habit is a problem which is not confined to India only. Many countries have faced this problem and have tried to solve it. Let us have a look at some of the innovative experiments in this area.

Malaysia

The Dewan Bahasa dan Pustaka (DBP) launched a Readership Promotion Campaign in 1980. As a result of this campaign which aimed at improving library services, research and surveys on reading habit, training, etc. DBP's print order for any title of a children's book is not less than 10,000.

³Data for 1979, from the UNESCO Statistical Year Book 1982

Japan

Japan's experiments have not only been unique, they have been extremely successful. It has a Japan Council for the Promotion of Book Reading, which not only sponsors a National Book Week but also a Children's Book Week. The Mainichi group of newspapers and the Japan School Library Association sponsor a contest where children are encouraged to write their own views on the theme of a book just read by them and its relationship with their past and future lives as well as a review of the book. The first prize is the "Prime Minister's Prize" and the winner has the honour of reading his report to the Imperial Family.

Two more successful experiments in Japan which have been singularly successful and have been quoted often are reading aloud by children for 20 minutes every day, to their parents and reading aloud by mothers to children, even to infants and very young children who have not yet learnt to talk and may not really comprehend what is being read. But the psychological effect of such readings is reported to have had a tremendous impact.

New Zealand

The New Zealand Book Council launched "The Book Flood" in 1972 which involved the supply of a very large number of books to each class in schools. It has been reported that in just one year children doubled their reading.

Australia

A public relations firm was employed to promote OZBOOKWEEK in Melbourne. During this week, newspapers issued special book supplements, book features and released special news about books, authors, etc. While special story-telling sessions were held, a costumed figure, OZBOOKWORM, appeared on TV, departmental stores, book stores, etc. like Santa Claus at Christmas.

USA

Children's book publishers sponsor a Children's Book Week every November during which posters, streamers, book marks, etc. are distributed. Two newspapers, The Boston Globe and The Chicago Tribune, give away prizes/awards. The most prestigious children's book award in the USA is the Newbery Medal given to the author whose book of that year is "deemed the most distinguished contribution to American literature for children". This book is decorated with a gold seal at bookstores and libraries.

India

We in India will have to tackle the problem in the context of our own literacy level, purchasing power, family environment, resources, etc. The following programmes may be tried out to provoke the reading habit:

(a) *Reading Programme in Schools*

All schools should be urged to set apart 30 minutes each day for the reading of books, other than textbooks, during school hours. At such sessions, books from the school library as also from the personal collections of students and teachers should be given to the children, who may be freely allowed to choose the books themselves (occasionally a student or the teacher may read aloud to the class). This will not only encourage reading but will also encourage personal collections.

(b) *Books as Prizes and Gifts*

We will have to encourage parents, friends and school authorities to give books as prizes, gifts, etc. If the publishers can cooperate and produce some gift cartons or gift sets of books, supplemented by some more attractive items like novelty pencils, sharpeners, erasers, pencil boxes, water bottles, etc. the idea is bound to catch on.

(c) *Grants to Schools in the form of Books*

Most of the schools receive grants from the government. If part of such grants could be

given as books, each school will have a well-stocked library of good children's books in a few years. As the selection of books may pose a problem, State-level committees comprising educationists, authors, illustrators and book reviewers, could be constituted in each State for selecting such books. If this is publicized properly, publishers would gladly submit their books to the committees, as they would be assured of substantial sales once their books are selected.

(d) *Taking Books to Children*

Instead of bringing children to the books, let us take the books to children, by holding regular exhibitions of children's books at schools, parks and places frequented by children. Even mobile vans can be used effectively. Publishers and book stores can earmark special days for children exclusively and invite conducted groups from schools to their shops.

The Granth Yatra, organised by the Marathi

publishing cooperative and readers' movement Granthali, which was a 19-day book procession-cum-fair and touched 38 places in Maharashtra, Karnataka and Goa, was a resounding success and is a step in the right direction of bringing the books to the readers.

(e) *Awards for Authors and Illustrators of Children's Books*

Publishers, newspapers, commercial houses, etc. may be persuaded to institute awards for authors and illustrators of children's books. Newspapers and magazines can serialize children's books regularly.

(f) *Strengthening of Library Network*

Libraries will remain the main source of books. It is, therefore, imperative that the library network in the country is strengthened. Libraries should actively embark upon acquiring mobile vans, for taking books to the children, both in rural and urban areas.

Examining and Assessing some Key Nutrition Educational Tools

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NUTRITION Educational Tools (NET) are outlining systems which are widely used by nutritionists and other health educators for providing adequate nutrition education in meal planning and counselling of both healthy and sick individuals. Nutrition Educational Tools (NET), therefore, must be appropriate for the individual's understanding and level of acceptance (Wheeler, 1985) as well as for the stage of required nutrition education. In view of this, the world's literacy level is to be considered when making Nutrition Educational Tools (NET). For example, in 1960, the world's illiteracy level was 39.3 per cent, while that of the African population was 81 per cent. After a decade, the illiteracy level of the world was 34.2 per cent and 73.7 per cent for the African population and still in 1981, Nigeria, the most populous country in Africa still had illiteracy level of 70 per cent (Asiedu and Oyediji, 1985). It is also very crucial to recognize that individuals differ widely in their dietary needs; this is why Nutrition Educational Tools (NET) should be evaluated to keep abreast with the changing approach to nutrition education, to have sequential guidelines that would be suited to the individual and contribute effectively to the

control of any underlining nutritional (Rice et al. 1975).

Nutrition education tools are of structured teaching aids. They provide information, reinforcement and efforts in pure provision of knowledge, but in behavioural changes that optimize meal planning.

One needs a structural framework to focus upon a path of action, but it can be limiting if the structure is too rigid. The NET should be easily understood and assist the individual in managing his diet and nutrition during the difficult time.

Thus, while there has been a great number of innovative Nutrition Educational Tools, the discoveries have not provided final answers. The Science of Nutrition is evolving and therefore nutrition educators must not turn ideas into dogma but be open-minded to keep abreast with new discoveries. The necessary skills could be acquired. The attainable goals of NET could be set as follows:

- (i) To allow for the use of a greater variety of foods.

To aid an in-depth continuing education of the individual in meeting management goals.

To provide for greater flexibility in meal planning and facilitate the improvement of overall health of the individual by incorporating optimum nutrition.

Review of the above goals (i-iii), nutritional tools should be periodically re-evaluated and updated as to its current applicability and usefulness in order to meet changing demands of the society.

Selection of Nutrition Educational Tools

Food Groups

The Basic Four Food Group (Table 1) which is also termed as the Daily Food Guide, is a planning tool that has been in use for many years (Hills, 1957). It is being used universally by nutritionists and other allied health professionals in meal planning, but also in evaluating food choices of individuals (Hills, 1972).

TABLE 1
The Basic Four Food Groups

Group	Major Nutrients
Meat and Alternates	Protein, Niacin, Iron, Thiamine (B ₁), Phosphorus
Grains and Cereals, Grain Products such as Guinea, Maize (Ogi) Cereals	Carbohydrate, Thiamine (B ₁), Niacin, Riboflavin (B ₂), Iron (Fibre)
Green and Yellow Vegetables	Vitamin A
Dark Green Vegetables, Yellow or Orange Fruits and Vegetables	Vitamin C
Dark Green Vegetables, Fruits and Vegetables	Carbohydrate (Fibre)
Dairy Products	Calcium, Protein, Riboflavin (B ₂), Phosphorus, Vitamin D

nutrition educators who scrutinize the usefulness of the Daily Food Guide feel the need to have other nutrition tools for optimum nutrition counselling (King et al. 1981) and (Hicks, 1977).

The main criticism of the Basic Four Food Groups is its failure to cater for the variations in food choices/section of people in the society. For example, throughout life, there are critical periods that warrant special attention in order to achieve and maintain optimum nutrition for health. These periods are:

- (i) Pregnancy and lactation
- (ii) Infancy
- (iii) Early childhood
- (iv) Adolescence
- (v) Middle age, and
- (vi) Advanced age.

At each of these stages, very significant physical and emotional changes which demand optimum nutrition occur, therefore, an educational instrument for meal planning suitable in taking care of these stages is required. Thus, nutritionists develop the Eight Food Groups (Table 2) to eradicate the limitations of the Basic Four Food Groups. Individuals are instructed during counselling sessions to choose foods from each of all the eight groups, thereby planning their meals with more selection of foods which in turn gives a greater amount of nutrients to cater for the needs of the body (Yetley, 1980). This tool can be used universally. In order to achieve maximum clarity and coherence, the nutrition educator has to include in each group the available indigenous foods of the area so that the individual's level of understanding the acceptance can be raised for planning adequate meals for optimum health.

TABLE 2
Eight Food-Group in Planning Meals for Optimum Nutrition for the Family

Food Groups	Nutrient Contributions for Body Needs
1. Fish, lean meat, poultry, eggs, dried peas and beans	Protein—for building and repairing tissue. Iron—for building blood. B vitamins—for the proper maintenance of appetite and nerves.

2. Dark green leafy and deep yellow vegetables, i.e. soko, carrots, etc	Vitamin A—to protect eyes and skin. Dark green leafy vegetables provide vitamin C (if properly cooked) and iron. Vitamin C—for healthy blood vessels and gums. Roughage—for good elimination and avoidance of some types of cancer.
3. Yam, potato and other vegetables	Yam, potato for iron and vitamin C (if properly cooked). Other vegetables—small amounts of minerals and vitamins
4. Whole grain breads and cereals, i.e. ogi, wheat bread, etc.	Calories—for energy. Vitamins and iron.
5. Fats and oil, margarine, butter, cooking oils, i.e. palm oil	Calories
6. Citrus fruits: orange, grapefruit, tangerine, and other fruits and vegetables, i.e. mango, greens, etc.	Ascorbic acid
7. Milk (powdered, evaporated or condensed)	Calcium—for building bones and teeth. Protein. Riboflavin—for helping energy to be produced.
8. Dessert: fresh fruits, pudding, i.e. rice, graham crackers, suitable cookies, etc.	Calories. Nutrients in varying amounts depending on choice.

2. The Nutrient Guide

The Nutrient Guide is recently developed as an educational tool for learning food composition as well as for understanding various nutritional concepts that are basic to nutrition education (Gillespie and Roderuck, 1983).

The NG is a relatively long and complex tool. It is made up of six lists of foods that are composed of groups of foods with similar nutrient composition.

These nutrient groups are:

- (i) Iron and Protein
- (ii) Iron, Protein and Thiamine
- (iii) Iron, low Protein and Thiamine
- (iv) Calcium and Protein
- (v) Vitamin A

(vi) Ascorbic Acid.

All foods used here in the nutrient must contribute 425 Kcal of energy. A w^{ls}. The "Personal Guide to Good Nutrition" is u^{ls}. The Guide with exchanges for each list. 'ommended Dietary Allowances (RDA and Nutrition Board, 1980) is also used to know the nutrient requirements of cademy using the NG. The "Personal Guide Nutrition" is used for selecting foods exchange list on the basis of the ind RDA (Yarbrough, 1981).

The potentials of the NG being a use^{o (1):27} ing tool universally are not possible a^{conomics} ment The individual's educational l^{conomics} vious nutrition knowledge, previou^{Chicago} related to health and the variables rela^{Chicago} use of the NG will affect the level^{n, 13:516} standing and the level of acceptance^{American} as an educational tool for nutrition c^{American} because there is a significant relatic^{American} tween the individual's nutrition know^{American} the value placed on healthy by the i^{American} using NG as an educational tool as r^{American} Gillespie and Roderuck's study (Gil^{American} Roderuck, 1983). Considering again^{American} literacy in the world, which is 65.8 p^{American} 30 per cent in Nigeria (Asiedu an^{American} 1985), the practical value of the NG i^{American} limited to the fewer literate people o^{American}

3. Exchange Lists

Exchange lists are the most widely tion educational tools for counselling and weight reduction counselling. P^{American} diabetic meal plans were not stand^{American} caused confusion to the diabetic bec^{American} ing control of caloric and nutrient i^{American} matter of varying methods by differ^{American}

In 1950, Exchange Lists were thereby increasing the value of di^{American} and the nutrition education of the p^{American}

The introduction of Exchange comes the following problems:

- (i) Prior lack of variety in foods

restriction of foods with no scientific justification.

Lack of flexibility in meal planning.

Previous use of complicated and impractical measurements.

Nutritional inadequacy in planning of meals (Caso, 1950).

Exchange lists have been revised twice (1986) to correct inaccuracies that have resulted due to the acquirement of new knowledge in order to improve the usability for meal planning thereby reflecting the principles of nutrition for diabetes mellitus as recently understood by therapeutic nutrition educators.

Revision involves: rewriting the exchange lists to make them more useful to the diabetic, eliminating a high carbohydrate and high

exchange lists, are accepted as essential in the management of diabetes and in minimizing the risk of developing long term complications.

4. *Healthy Food Choices*

The Healthy Food Choices is a simplified meal planning tool recently developed for the educational diabetics who cannot understand the term "exchanges" in the Exchange Lists. Instead of the nutritionist taking the leadership role of teaching the health team how to use the Exchange List, the Healthy Food Choices is simplified to include specific recommendations such as "Eat less fat; use less salt". "Salt" is used in this tool and not "sodium" as used in the Exchange Lists.

It is designed for Dietitians/Nutritionists as part of the initiative in assisting physicians and other health professionals in counselling key personnel (nutritionists) should assume a leadership role in the education of physicians as well as individuals with diabetes mellitus about diet and related concepts.

The lists are made up with a variety of foods including some universally known ethnic foods. Nutritionists should add in appropriate ethnic foods from their areas. This will enable the nutritionists to plan meals to fit individual tastes within the per-sonally available food and prices at the local

The second part of the tool is made up of six food groups in which foods are grouped by calories. Approximate portion sizes of commonly used foods are listed with instructions to receive nutrition counselling accompanied with general guidelines of meal planning. With the Exchange Lists tool, therapeutic nutritionists are solely responsible for dissemination of diet therapy while the Healthy Food Choices is a simplified tool for the diabetic to use with minimum counselling. The tool has been field-tested by health professionals such as dietitians, physicians and nurses (ADA, 1986). It is also intended to have a wider applicability in variety of situations because "diabetes" is not mentioned in the tool.

A therapeutic goal in treating the diabetic is to achieve a normal state of metabolism as well as therefore diabetics must participate in their own care (ADA, 1977).

Diabetes mellitus is a metabolic disease with nutritional implications. Nutrition education and counselling, which can be given by a therapeutic nutritionist with the use of the

Summary and Conclusions

Four Nutrition Educational Tools (NET) are reviewed to determine their usefulness and applicability in nutrition education. It is commend- ing to see that continuous assessments of tools of this importance persist in giving optimum nutri- tion care.

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Self-concept: Effect of Levels of Academic Achievement and School Backgrounds

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SELF-CONCEPT refers to the individual's perception of himself (Brownfain, 1952 and Anastasi, 1964). It is a developmental process and is formed of the bio-social interaction and experiences gained by the individual. So it is influenced by a number of socio-psychological factors. Like other factors, levels of academic achievement and types of school may also influence it. Shivappa (1969) in a study obtained that high achievers tend to rate themselves high on self-image and low on self-concept. Vasantha (1978) found a positive relationship between self-concept and scholastic achievement. High self-concept in college was found to be accompanied by high scholastic achievement and low self-concept by low scholastic achievement. Mehta (1968), Vasantha (1977), Williams (1973), Stenner et al. (1978), Goswami (1980), Sharma (1983) and Singh (1987) also obtained positive correlation between self-concepts and scholastic achievement. However, differences

among self-concepts of low, average and high academic achievers have not been explored

There are studies which demonstrate that girls of private schools excelled in verbal and non-verbal dimensions of creativity (Gupta, 1978). The studies of Opel and Sen (1980) showed that the subjects of private schools had a positive attitude towards self, adequate relationship, higher need for achievement and nurturance and a higher level of intelligence than the subjects of government schools. Hasnain and Panwar (1987) did not find any significant effect of levels of academic achievement and types of school background on insecurity. Their interactional effect was also found to be insignificant. An inference may be drawn from the findings of these studies that there may exist differences among the self-concepts of subjects of government, private and public schools. In the present study, an attempt has been made to explore these differences.

Methodology

Sample

A total of 180 students, 60 each from low, average and high academic achievers were randomly selected from Class XI of government, private and public schools of Pithoragarh and Nainital cities, Kumaun region, Uttar Pradesh. There were 20 low, 20 average and 20 high academic achievers in each type of school. The high school marks were taken as the criterion of academic achievement.

Design

Two independent variables, levels of academic achievement and types of school background, were taken in the study. There were three levels of academic achievement, viz., low, average and high and three types of school background, i.e. government, private and public, with a 3×3 factorial design making nine groups of subjects of various combinations.

Tool Used

Mohsin's (1979) self-concept inventory was used to measure the self-concept of the subjects. The inventory contains 48 'yes' and 'no' type items, 50 per cent of them positively phrased and 50 per cent negatively phrased about abilities and strengths pertaining to the cognitive, affective and conative areas. One mark for each positive item and each negative item was awarded. The split-half reliability, using the Spearman-Brown formula, was 0.73. The correlations between self-concept inventory and short version of Maslow's SI test and Mohsin's parent-child inventory are reported to be -0.352 and 0.396, respectively.

Results and Discussion

The mean self-concept scores of all the groups were calculated and analysis of variance was applied to find out significant differences among

the groups and the interactional effects of the independent variables which are shown in the following tables.

TABLE 1
Mean Self-concept Scores of Various Groups

School Backgrounds	Academic Achievers			Mean of Means
	Low	Avg	High	
Government School	34.10	32.30	32.10	32.83
Private School	35.65	36.25	33.60	35.16
Public School	31.95	30.35	31.35	31.22
Mean of Means	33.90	32.96	32.35	

TABLE 2
Results of Analysis of Variance

Source of Variation	Sum of Squares	df	Mean Squares	F	Level of Significance
1. Between Levels of Academic Achievement	110.63	2	55.35	1.52	.05
2. Between Types of School Background	561.42	2	280.71	7.69	.01
3. Interaction. Academic Achievement $\times$ School Backgrounds	73.95	4	18.45	0.507	Insignificant
4. Within Groups (Errors)	6325.95	171	36.45		
Total	6980.95	179			

A glance through Table 2 shows that F-ratio for academic achievement is 1.52 which is significant at .05 level of confidence. It means that academic achievement influences the self-concept in a significant way. Since the F-ratio for academic achievement is significant, it may be said that low, average and high academic achievers differ significantly in their means self-concept scores. A perusal of Table 1 reveals that the mean self-concept scores of low, average and high academic achievers are 33.90, 32.96 and 32.35, respectively. It means that low academic achievers have significantly the best self-concept and high academic achievers have significantly the poorest self-concept. It means that academic achievement is negatively related with self-concept. This finding is in consonance with the

finding of a study conducted by Shivappa (1969) but it negates the findings of Mehta (1968), Vasantha (1977), Williams (1973), Stenner et al. (1978), Goswami (1980), Sharma (1983) and Singh (1987).

It seems that high academic achievers because of their preoccupations in studies do not have much concern with and bother about their image of themselves. On the other hand, low academic achievers being poor in achievement seem to have much concern with their image of themselves and average academic achievers being mediocre in their studies bother more than high academic achievers but lesser than low academic achievers regarding their views and perception of themselves.

Table 2 shows that the F-ratio for types of school is 7.69 which is significant at .01 level of significance. It means that types of school background influence the self-concept of students in a significant way. Since the F-ratio for the types of school background is significant, the self-concept of the students of the three types of school differ from each other in a significant way. A

perusal of Table 1 reveals that the mean self-concept scores of the students of private, government and public schools are 35.16, 32.83 and 31.22, respectively. It means that the students of private school have significantly the best self-concept and the students of public schools have significantly the poorest self-concept. Curricular and co-curricular activities and private school environment seem to be more conducive to the development of self-concept.

Table 2 shows that the F-ratio for the interaction of academic achievement and school background is 0.507 which is not significant at .05 level of confidence. It, thus, denotes that though the levels of academic achievement and types of school background individually bring about differences in self-concept, but when their effects are combined together, the differences are nullified. Thus it may be said that levels of academic achievement and types of school background do not go hand in hand and it is not necessary that a specific level of academic achievement of a particular school may necessarily lead to a good or poor self-concept.

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Attitudes and Attitude Change of Teacher-trainees

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IT is no more rhetoric that "the destiny of India is now being shaped in her classrooms" (Kothari Commission, 1964-66). In a world based on science and technology, it is education that determines the level of prosperity, welfare and security of the people. The quality of education calls for improvement in teacher education. This necessitates not only improving the knowledge and teaching competence of a teacher but also inculcating in him healthy professional attitudes and desirable teacher-like qualities. How a teacher performs his duties as a teacher, is dependent to a great extent on his attitudes, values and beliefs. The fact that attitudes give direction to one's behaviour implies that they are very similar to motivation, goal seeking and purposive behaviour. A positive favourable attitude makes the work not only easier but also more satisfying and professionally rewarding. A negative unfavourable attitude makes the teaching work harder, more tedious and unpleasant. Moreover, effective learning on the part of the pupils can be achieved by employing teachers with desirable attitudes or by shaping their attitudes in the desired direction. There is ample research evidence to show that favourable attitudes towards the teaching profession on the part of prospective teachers are positively and

significantly correlated with job-satisfaction and course achievement (Aggarwal, S.P. 1974; Garcia, R.A. 1976; Gupta, Y.K. 1985; Venketiah and Jayachandra Naidu, 1986). Hence, it appears relevant to assess the attitudes of prospective teachers towards the teaching profession and its allied aspects. An equally important task is to find out to what extent teacher education programmes achieve their objectives. One of the important objectives of teacher education is to imbue prospective teachers with a noble sense of dedication.

With the long history of debate and research, it becomes important to know the ways in which teacher education contributes to the development of certain attitudes in pre-service teachers. Veenman (1984) in his review of literature on teacher attitude change cites various studies that support the commonly accepted view that attitude in pre-service teachers shifts from traditional to liberal during course work but back to traditional during teacher training. But a few experimental and field studies show that teacher training has a favourable impact on the values and attitudes of teacher-trainees (Aggarwal, 1974; Garcia, 1976; Verma, 1968). Again, while the study of Ahluwalia (1974) carried on a large sample of B.Ed. students from states of Uttar

Pradesh, Madhya Pradesh, Bihar, Rajasthan and Haryana found that attitudes as a general use deteriorated in place of improvement at the end of teacher training, the other studies of Brooks (1976), Dillard (1975) and Gryzb (1974) found no change in attitudes as a result of teacher training. Hence the present study was carried out with two-fold objectives:

- (i) To assess the attitudes of teacher-trainees towards the teaching profession and its allied aspects at the beginning of the teacher training programme.
- (ii) To assess the change in attitudes (if any) of teacher-trainees towards the teaching profession as a result of the teacher training programme.

It was hypothesized that the post-test attitude scores of teacher-trainees would not differ significantly from the pre-test attitude score. This main hypothesis is applicable to all the six sub-scales of the Teacher Attitude Inventory (TAI by Ahluwalia). These six aspects dealt with in the inventory are attitudes towards:

- (i) Teaching profession
- (ii) Classroom teaching
- (iii) Child-centred practices
- (iv) Educational process
- (v) Pupils
- (vi) Teachers

Method

Sample

The total sample consisted of 110 B.Ed. students, both males and females, (of English-medium section) drawn from the Department of Education, University of Delhi, Delhi. The Department admits students on the basis of three-way sequential screening process of merit, written test and finally interview. No distinction was made in terms of the various teaching subjects offered by the students. It was a case of incidental sampling. It was not possible to draw a random sample in view of the fact that frank and honest responses to an attitude scale cannot be obtained

without the willing cooperation of the respondent. Ninety per cent of the respondents were within the age-group of 20-25 years. Fifty-five per cent of the subjects were graduates and the remaining 45 per cent were post-graduates.

Tools

The Teacher Attitude Inventory was used to assess the attitudes of the teacher-trainees. This inventory is a 90-item Likert instrument, consisting of six sub-scales as mentioned earlier. These sub-scales were developed by the Likert summated rating procedure. Each scale has 15 statements that pertain to a particular aspect of prospective and practising teacher's professional attitudes. The theoretical range of scores is from 0 to 360 with the higher score indicating more favourable attitudes. Both test-reliability and validity have been reported to be quite high.

Procedure

Since the present investigation was concerned with the measurement of change in attitudes, pre-test post-test design was followed. Pre-test data were obtained in the first week of September, (the session starts in the first week of August) before the student-teachers were about to begin teaching practice. Post-test scores were obtained in the last week of March, when the trainees had completed the teaching practice schedule. Both pre-test and post-test data were obtained by administering the inventory, in classroom setting, to a group of 20-25 students

Results

Mean, Standard Deviation and Standard Error of Mean were calculated to find out the attitudes of teacher-trainees on pre-test and post-test scores and 't' test was applied to find out the change in attitudes between pre-test and post-test scores. These results are shown in Table 1.

An analysis of the data reported in the table highlights the following points:

TABLE I
Comparison of Pre-test and Post-test Attitude Scores of
Teacher-trainees

Sub-scale		Pre-test Scores	Post-test Scores	't' Value
Teaching Profession	Mean	39.95	37.89	1.41
	S.D.	6.34	13.91	
	S.E.M.	.60	1.33	
Classroom Teaching	Mean	36.7	36.63	0.14
	S.D.	5.21	5.63	
	S.E.M.	.60	.54	
Child- centred Practices	Mean	46.04	46.05	0.03
	S.D.	5.33	6.22	
	S.E.M.	.50	.59	
Educational Process	Mean	50.83	46.81	0.48
	S.D.	28.47	6.51	
	S.E.M.	2.7	.62	
Pupils	Mean	40.98	41.61	0.24
	S.D.	17.48	5.71	
	S.E.M.	.52	.54	
Teachers	Mean	40.44	39.48	1.21
	S.D.	4.88	6.67	
	S.E.M.	.47	.64	
Total	Mean	250.11	248.46	
	S.D.	30.03	28.45	
	S.E.M.	2.9	2.71	

N.S. — None of the 't' Values is significant at .05 level

- (i) In terms of pre-test scores, the overall attitudes of the student-teachers are within the moderate range and not very highly favourable.
- (ii) Within the favourable moderate range, the highest mean score is on factor IV and the lowest on factor I.
- (iii) In terms of the overall change in attitudes, post-test scores (when compared with pre-test scores) show negligible change. Rather, the scores show a negligible trend towards decline.
- (iv) In terms of the shift in attitude scores on separate sub-scales, there is practically no shift of factors II, III and IV.
- (v) Summarizing the results, there is no shift in the attitude score. In fact, they show a tendency towards decline. Therefore, the null hypothesis of no difference between pre-test and post-test scores has been accepted.

Discussion

Moderately favourable mean pre-test attitude scores reveal that student-teachers are not highly committed to the teaching profession. In fact, their beliefs and convictions regarding the honourable status of the teaching profession and teacher in the community are not strong.

Analysis of the mean scores of each sub-scale shows that of factor I, majority of the student-teachers have been found to be not strongly convinced about the prestige of the teaching profession. Favourable moderate range of scores do not, of course, indicate that those who fail in other fields usually becomes teachers. Nor do they think that the teaching profession makes people lazy or it appears to be interesting only in the beginning.

Moderately favourable scores on factor II indicate that teacher-trainees have been found to agree on the following points: Classroom teaching should not be as quiet as a graveyard, classroom teaching strengthens the desire to learn. On the following points, student-teachers do not agree. Bright and talented students often suffer in classroom teaching. The principle of 'teaching by doing' cannot be implemented. Since the mean scores on this sub-scale approach the range of 'high' scores, it suggests that teacher-trainees' strength of conviction of attitudes towards classroom teaching is low.

Highly favourable pre-test scores on childhood practices reveal that teachers are of the opinion that students' abilities and behaviour should be taken into consideration both during teaching and assigning homework. Again, highly favourable attitudes towards the 'educational process' show that teachers believe that 'students learn more by love rather by punishment' and that just one method of teaching is not sufficient for all types of students, and teachers should keep friendly relations with pupils.

Since the obtained pre-test scores of factor V, approach 'high' category in a favourable direction, it means that teachers' sense of conviction is not strong on the following statements:

'students are generally sincere' and 'students should be allowed to ask question in the class'. The same moderate position holds in the case of factor VI. Most of the respondents feel that a teacher respects everybody and a teacher is free to express his opinion.

The above trend of findings supports the earlier research study of Aggarwal (1974) in which attitudes of teacher-trainees towards 'child-centred practices' and 'educational process' were found to be more favourable than attitudes scores on other aspects of TAI.

Acceptance of the null hypothesis of no difference between pre-test and post-test scores indicates that the teacher education programme, both theory and practice, had no impact on the attitudes of teacher-trainees. Therefore, the above discussion of pre-test scores is equally applicable in case of post-test scores. The results are in conformity with other studies reported in literature (Brooks, 1975; Dillard, 1974; Gryzb, 1974; Tabachnick and Zeichner, 1984) where it has been reported that the experimental group

did not differ significantly from the control group in terms of change in attitudes as a result of teacher training. However, the present study fails to support the findings of a research study by Skipper and Quantz (1987) in which it was found that education majors become more progressive in their attitudes towards educational practices after experiencing professional courses and clinical and field experiences.

The above conflicting trend of research findings can be better understood within the framework of factors affecting attitude change. Both experimental and field studies in the field of attitude change clearly reveal that change in attitudes does not follow the same pattern for all groups of students but depends on personal characteristics, subject matter preference, qualities of training and situations at work. It is also possible that the contradictory findings of different research paradigms may be reflecting the different facts that make up the attitude constructs.

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Children with Learning Problems: The Role of Integrated Schooling

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NEEDLESS to emphasize that the very presence of behaviour-problem children in the classroom, whether their problems are aggressively acted out or manifested in quiet withdrawal, eventually, have an effect on those with whom they come in contact. Unless they are identified and properly managed, there will be interference in the classroom learning process. They may be a permanent source of irritation for the teachers and may lead to a series of potentially critical confrontation within and outside the school campus. Hence an effort towards early identification and modification of behaviour disorder may not only help save a good number of mental cases resulting in marked decline in the number of undesirable anti-social elements delinquents and isolated adults but would also serve a more important function of minimizing the high dropout rate from among the school-going population.

The sample for this study was taken from a population of 600 students of a local convent school. The students of Classes VI-IX were included in this investigation. Only referral cases identified by parents, teachers and peer groups were taken as a sample for further investigation.

Rutter's Child Behaviour Rating Scale was administered for verification and elimination of doubtful cases. For determining the possible cause or causes of disorder, a questionnaire pertaining to information regarding parents' economic status, order of birth, parent-teacher relationship and other relevant information related to the child's case history was prepared and administered. The data thus collected were scored and given statistical treatment for further analysis and interpretation. Since the investigators were not interested in studying the cases of behavioural problems caused by socio-cultural backwardness and also because of mental retardation, the study was confined to a school in which the population, to a great extent, was homogeneous in terms of economic status, institutional strategies and educational standard. Similarly, the students of up to fifth standard were not included to eliminate the cases of slow learners and mental retardation. However, after employing various processes of elimination, only 60 students comprising only ten per cent of the total population could be retained who could qualify to be termed as children with behaviour problems. The rest who scored less on the

behaviour scale and whose case history and school achievements could not support teachers' observations, were dropped out of the list.

This study, however, helped the investigator to derive the following conclusions:

1. Only 60 students out of 600 school population were identified as children with behaviour disorder.
2. Five per cent of the population, i.e. 30 students of the given sample, were identified as emotionally disturbed and socially maladjusted.
3. Two per cent were gifted under-achievers.
4. Three per cent cases remained unidentified, who might be children with learning disabilities, or mild vision, or speech and auditory impairment.

Though this study was confined to a very small population representing only middle and high income group children but the findings seem to be alarming and the results may be taken as an index for predicting the prevalence of children with behavioural disorder in our classrooms.

Being inspired by this study, the investigators made another effort to find out the incidence of children experiencing learning problems because of some other disabilities, both in terms of economic status and socio-cultural dimensions.

The second study was conducted over a population of 2500 students represented by members of both sexes. The sample for this study was collected from two high schools managed by the Aligarh Muslim University.

Assumptions

1. Children with learning problems exist almost in every educational institution.
2. The population of such children is of heterogeneous characteristic representing different types of disabilities and exceptionality.
3. They generally show an inability to learn in a normal situation because of some unidentified intellectual, sensory, neurological, behavioural or learning problems.

4. They show inability to build or maintain satisfactory inter-personal relationship with peers and teachers and remain a permanent cause of trouble to them.
5. Because their needs remain unsatisfied for a long period, they develop behaviour problems, manifest environmental conflict or personal disturbance, which are typically accompanied by learning disorders.
6. It is these children who may be termed as potential dropouts.
7. Early identification screening, placement and psycho-educational intervention are the only alternatives to encounter the problems of such children, before they become unmanageable.
8. An alternative educational arrangement or IED programme would not only educate them according to their needs but would also serve a much important objective of reducing the dropout rate.

Objectives of the Study

1. To identify children of 11 to 14 years of age with learning problems in the classroom.
2. To classify the identified population on the basis of the mode, extensity and duration of disability.
3. Screening and placement of children for clinical and psycho-educational intervention, according to the degree of disability.
4. To compare the value judgement of children with problems with normal children within the school system.
5. To evaluate the effect of clinical and psycho-educational intervention, i.e. IED programme on the dropout rate, class attendance, scholastic achievement and behaviour of the classified population.

Hypotheses

The following hypotheses were formulated for this study:

1. Children with learning problems exist almost in every educational institution.
2. Children with unidentified disability experience repeated failure in their academic achievement and also in developing inter-personal relationship with peers and teachers.
3. Being frustrated by repeated failure, they develop conflict with peers, teachers and parents and manifest behaviours in more than one situation.
4. Such children, sooner or later, leave the school and may be termed as potential dropouts.
5. Early identification, adequate screening and placement and proper psycho-educational intervention may help children improve their academic achievement, reduce their tension and prolong their stay in school.
6. Since a large population among the identified group does not qualify for admission to special schools, the only alternative is to retain them in common schools with additional support and guidance according to their learning needs.
7. If adequate support services on proper guidelines are made available to teachers for adjustment of instructional materials and teaching styles to meet the needs of such children, the problem would be minimized.

Tools

For the purpose of this investigation the following tools were used:

1. Teachers' observation
2. Rutter's child behaviour rating scale
3. Socio-economic-cum-family structure inventory
4. Achievement record
5. Pupil classroom interaction rating scale
6. Value climate rating scale

Procedure

In order to make the study more interesting and meaningful, population of well-adjusted and disciplined children was included. Similarly, in order to compare the value judgement of disciplined and problem children, the value climate rating scale for school children was also introduced in this study. Apart from this, another more sophisticated approach of studying the behaviour pattern of individual child, was used. This technique, the classroom interaction analysis, was developed on the pattern of Flunder's interaction analysis approach for studying teacher classroom behaviour.

In this approach the investigators devote ten minutes' time in each period for seven days for studying each student's behaviour in the classroom in actual learning situation. The only difference lies in its administration. In Flunder's case the observee is aware of the observant's activity but in the later case the observee is unaware of whether he or she is being observed.

The findings of this study, to a great extent, were found similar to those which have been referred to earlier in the paper. However, the difference lies in the number of cases termed as children with learning disorder.

- (a) While in the previous case only ten per cent were found in this category, in this case the number of boys was increased by 2.5 per cent while the number of girls was just half the boys' population.
- (b) The population of children with learning disorder in the low socio-economic group was found much higher than in the higher socio-economic group.
- (c) There is a sharp difference in the value judgement of children with behaviour problems and well-adjusted children.
- (d) The group of children with behaviour problems was about 30 per cent of the total identified population. They form a heterogeneous group. There are emotionally disturbed children who manifest aggressive behaviour such as disobedience, disruptive-

ness, defiance and uncooperativeness but there are also children who show anxiety and withdrawal behaviour, such as shyness, self-consciousness, fearfulness and hypersensitivity.

- (e) The learning problem of approximately 50 per cent of the identified population was found associated with one or the other type of disability.
- (f) Ten per cent were gifted under-achievers.
- (g) Ten per cent manifested indifferent attitudes towards school and did not have any interest in their subjects.

On the basis of the above two studies, the investigators are in a position to derive the following inferences:

- (i) Schools with more heterogeneous characteristics may have a high percentage of problem children.
- (ii) Through an attempt of early identification, proper diagnosis and adequate treatment, approximately half of the identified population may be saved from developing a severe type of behaviour problems and other disabilities.
- (iii) The existing school system, even in its best form, does not have the potential, and, hence, does not promise to supply education according to the learning needs of the children falling in the above category. This would, however, be possible only by extending assistance to the teachers in terms of resource persons and alternative educational provisions including extension of special education services.

The investigators were aware of the limitation and are of firm belief that simple identification of children with behaviour and learning problems will not serve any purpose unless it is adequately followed by modification of the behaviour of children and systematic psycho-educational intervention. There is no doubt that such an effort will reduce the drop-out rate to a considerable extent and would be of

great significance for students, teachers, parents and society at large.

Discussion

Our classrooms are generally heterogeneous in character in the sense that there are children who are mentally alert, intellectually superior, socially adjusted, emotionally stable and disciplined. But there are also students who are slow learner, socially and culturally backward, emotionally unstable and maladjusted. There are children from high socio-economic strata and also children from very poor socio-economic and cultural background. Such a diversified classroom setting imposes great limitations on the classroom teacher in fulfilling his responsibility as an effective educator. Apparently, the children who are responsive and are willing to cooperate with the teacher, pose least problems to him but the existence of children in the classroom who are not adjusted and manifest certain types of misbehaviour is the real cause of worry because they have the potential of creating major obstacles in developing an effective classroom learning environment.

Provision of services of psychologists, social workers, counsellors and pediatricians in every school is a dream which is not going to be fulfilled in near future. Teachers who have been considered as the most important factor influencing the child's behaviour are not sincere enough to bear such responsibility. As such there is an immediate need for developing professional consciousness among teachers, parents and members of the community regarding the intensity of the problem and their responsibilities. In view of all the above facts, it appears that every possible effort should be made to provide professional training to teachers to take the responsibility of identifying children during their early childhood and play an important role in managing such cases. They have to bear an additional responsibility of cultivating the confidence of the parents in achieving their support for preventive and curative purposes.

Admittedly it is the school teacher who can work as one of the most important persons to refer the problem cases to professional experts at a proper time and play an important role in providing counselling and guidance to the students according to their needs, as a primary measure. The teacher and the administrators may also take the help of the agencies involved in the scheme of integrated education for the disabled

Study Habits of First Generation Learners

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THERE are many categories of socially disadvantaged people. Like the scheduled castes, scheduled tribes, physically handicapped, and mentally retarded, the first-generation learners are also a socially disadvantaged class. Their parents, being illiterate are unable to guide their children in various areas of study and job selection. They are the first to come out of their families to get formal education. They face various problems in their career development, education, motivation, etc and the result is poor academic performance, low motivation and selection of lower jobs.

Studies on the first-generation learners are rare. Mehta and Saraswat (1984) and Mehta and Mathur (1986) in their studies on the children of Class I reported the differences in family background and cognitive ability variables unfavourable to the first-generation learners. They also reported some cognitive differences. Mehta, et al reported poor performance on cognitive and achievement variables Vocational preferences were also lower in comparison to other groups.

The first-generation learners may also be poor in their study habits. Learning is a complex process in education. The task of learning is not related to the teacher alone but to the satisfactory learning process also. It requires many things on the part of the learners, like his ability to schedule his time, the plan of study, concentration, notes taking, mental review, mass and part learning, etc.

For better academic achievement, good study habits are essential (Thompson and Mark, 1976; Dahiwalwa and Saini, 1975; Diener, 1976). Generally students, knowingly or unknowingly, take over the method of study from their parents, elder brothers or sisters and from other persons in the neighbourhood. The first-generation learners do not get any opportunity to learn from elders in the family, hence they remain an unsupervised and unguided lot. Chauhan and Singh (1987) reported the scheduled caste students having poor study habits in comparison to the non-scheduled caste students.

The present investigation had the objective of observing the study habit preferences between

the first-generation learners and the non-first-generation learners, as well as male and female students. It was therefore hypothesized that the first-generation learners would be significantly poor in all the areas of study habits. The second hypothesis was that males and females will not differ significantly.

Sample

The sample consisted of 54 first-generation learners (27 male and 27 female) and 54 non-first-generation learners (27 male and 27 female). The selection was made randomly from junior colleges of arts, science and commerce, making 2×2 (two levels of generation and two levels of sex) factorial design. The selection was strictly on the basis of parents' education. The parents of the first-generation learners hardly had education up to second or third standard or no education at all. The mean age for FGL males, FGL females, NFGL males and NFGL females was 19.30, 18.11, 17.48 and 17.59 years, respectively.

Test and Procedure

For the present investigation the study habit inventory by Patel was used. This inventory measures seven areas of study habit, e.g. home environment and planning, reading and notes-taking, planning of subjects, concentration, preparation for examination, general habits and interest and school environment. The test was in Hindi and could be administered in 20 minutes.

The test-retest reliability of Class XII student was found to be .68. To ascertain the validity of the test, the items with areas were checked by four psychologists and they were in greater agreement with each other.

The test was administered in the classrooms as a group. There were five alternative answers to each item and the subjects were asked to rate their study habits on each item by marking the alternative.

Results and Discussion

The dependent measure of study habits was subjected to the analysis of variance. For this propose, 2×2 factorial design was used. All the areas of study habit were treated alike. These areas were 1. Home Environment (HE), 2. Reading and Notes-taking (RN), 3. Planning of Subjects (PS), 4. Concentration (CO), 5. Preparation for Examination (PE), 6. Habits and Interests (HI), and 7. School/College Environment (SCE). From the perusal of Table 1 we find that the first-generation learners differ from the non-first-generation learners significantly, showing poor habits in four areas, i.e. Planning of Subjects ($F = 11.30, p < .01$), Preparation for Examination ($F = 4.43, p < .05$), Habits and Interests ($F = 13.06, p < .01$) and School/College Environment ($F = 10.53, p < .01$). No sex differences were observed in any area of study habits. The interaction effect between sex and generation was present only in one area, i.e. planning of subjects. The analysis of simple effects indicates that the

TABLE 1
Summary of 2×2 (Generation $\times$ Sex of Sa.)
F Ratios on (1) Home Environment, (2) Reading and Notes-taking, (3) Planning of Subjects, (4) Concentration,
(5) Preparation for Examination, (6) Habit and Inclination, (7) School/College Environment

Source	F Ratios and Significance						
	(1) (HE)	(2) (RN)	(3) (PS)	(4) (CO)	(5) (PE)	(6) (HI)	(7) (SCE)
A (Generation)	0.963	2.17	4.91*	11.30**	4.43*	13.06*	10.53**
B (Sex)	.153	2.39	0.02	0.78	1.35	2.86	2.15
A $\times$ B	0.001	3.09	4.91*	1.79	1.93	.47	.01

* $p < .01$, ** $p < .05$

first-generation males ($x = 17.74$) scored significantly less in comparison to the non-first-generation learners ($x = 20.74$, $F = 9.478$, $p < .01$).

Thus there are three important findings of the present investigation. First, the non-first-generation learners were superior to the first-generation learners in the areas of planning of subjects, concentration, preparation for examination, habit inclination and school/college environment. These results were consistent with the prediction, except two areas, i.e. home environment, and reading and notes-taking. Mandal and Sutradhar confirmed that the contribution of father's educational background was more important than the intelligence of children to their academic achievement. In fact the development of intelligence of the child takes place according to the environment at home (Jehan and Ahmed, 1960). Chauhan and Singh (1987) also found the scheduled caste adolescents as a fairly disadvantaged group in study habits. It should be mentioned here that most of the scheduled caste children are first-generation learners.

No sex differences were observed in any area of study habits. The result was consistent with our second prediction, showing similarity of study habits between both the sexes. Many

researchers did not find sex differences in areas like school adjustment. Contrary to this finding, Bose and Mishra found that sex differences plays a vital role in study habit pattern. Saini (1969) and Kakkar (1967) also did not find any sex difference in study habits.

On planning of subjects, the females of both the groups, FGL and NFGL did not differ at all with each other while the non-first-generation males were superior to the first-generation males. It can be assumed that NFGL males are more particular in planning their subjects as required for career development by the societal and cultural factors, while the females of both the groups are equally serious in the planning of the subjects.

The findings of the study place first-generation learners at a disadvantage as they were found poor in various areas of study habits. Parents and family background play a great role in forming study habits of the children. In case of first-generation learners the teacher has to play a great role in directing the studies of disadvantaged children. His help is required not only in the classroom but out of the classroom too.

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Political Socialization of Secondary School Students

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IN the study of discipline, political socialization is an important aspect because all political scientists, psychologists, sociologists and educationists together as political sociological scientists are playing their role in the modern political social behaviour. It is through political socialization that political values, beliefs, behaviour, etc. are handed over from one generation to another. Political socialization not only transfers political culture but it also reconstructs it and preserves it.

The educational system of every country is developed in accordance with the social, cultural, economic and political needs and aspirations of its society. The basic aim of education is to preserve society and make it better. According to Hook and Sydney, education in its wider and least contradictory sense may be defined as self-realisation of a society's culture and its transfer from one generation to another.

The concept of political socialization took birth probably in 1959 with the publication of Herbert Hemon's *Political Socialization*. According to David Easton and Jack Denis, the development of political socialization is based on those processes through which an individual moulds himself to politics and adopts its behavioural

patterns. Fred I. Greenstine regards political socialization as political learning in all the situations of life—formal and informal, planned and unplanned. This includes political as well as non-political learnings. Kenith P. Lagton, while explaining political socialization, writes that it is a process brought about by different social agencies through which an individual learns significant political order and behaviour pattern.

Almond and Pawel regards political socialization as a process by which political cultures are stabilized or modified. Through the medium of this function different people are trained in political culture and they are oriented towards political objectives. Moreover, it is through political socialization that changes in political culture and structure are brought about.

Objectives

The objectives of the present study were:

1. To know the political socialization of urban boys and girls.
2. To know the political socialization of rural boys and girls.
3. To know the class-wise political socialization of urban and rural boys and girls.

Sample

A stratified random sample of 1000 students was used for the present study. Out of these students, there were 500 boys and 500 girls from Jaipur district. The sample consisted of 100 boys and 100 girls each from Classes VI to X of 20 schools.

Hypotheses

For the present study the following null hypotheses were constructed:

1. There is no difference in political socialization of urban and rural students.
2. There is no difference in political socialization of boys and girls.

Tools and Techniques

Two hundred and seventy questions relating to political socialization (political knowledge, political interest, political attitude and political participation) were framed and they were tried out. On the basis of the try-out, the language of the questions was modified and 252 questions were tried out at the second stage. Thereafter, 150 questions were selected on the basis of difficulty level. Out of 150 questions, 55 questions

related to political knowledge, 25 questions to political interest, 32 questions to political attitude and 38 questions to political participation.

Mean difference between means, standard deviation, critical ratio were used in this study.

In Table 1 are given the mean, the standard deviation, the critical ratio and the level of significance of both male and female students of Government and aided institutions in Jaipur City. The difference between the means of boys and girls is 4.6. When we examine the critical ratio, we find that the obtained critical ratio at both the levels is meaningless. It is on this basis that we can say that whatever difference is found in the development of political socialization of boys and girls is not at all statistically important.

Like the boys and girls of Government and aided institutions in the urban area, the standard deviation in the case of boys is less than girls, which shows the stability of political socialization among the boys. In Government institutions, the mean of the obtained marks of girls is much more than that of boys but in aided institutions the mean of the marks obtained by boys is a little greater than that of the girls. If both (Government and Aided) institutions are taken into consideration, then the joint mean of girl

TABLE 1
Development of Political Socialization of Total Urban Students

Students	Number	Mean	Standard Deviation	Difference between Means	Critical Ratio	Level of Significance
Boys	250	164.56	27.45	4.60	1.81	Insignificant
Girls	250	169.16	29.57			

TABLE 2
Development of Political Socialization of Total Rural Students

Students	Number	Mean	Standard Deviation	Difference between Means	Critical Ratio	Level of Significance
Boys	250	157.76	24.87	3.64	1.54	Insignificant
Girls	25	161.40	28.02			

students is higher than that of boys. Now there is a feeling among girls to get good results for themselves and thus surpass boys. At present, leaving a few areas, girls are trying to be at par with boys. Perhaps the above position is the result of greater political socialization among girls.

In rural areas, aided institutions are found in very small numbers, so the students of Government schools were included in the population sample. The mean of marks of boys and girls of rural areas for political socialization are 157.76 and 161.40, respectively, and the difference between the means is 3.64. The standard deviation of the boys and girls in rural areas, respectively, are 24.87 and 28.02. The value of obtained critical ratio, i.e., 1.54 is meaningless at both the levels of significance. Thus we can say that statistically there is no difference in the development of political socialization of boys and girls in rural areas. Like Government and aided institutions in urban areas, the standard deviation of boys in rural areas is less than that of girls. Here, too, the standard deviation establishes the stability of political socialization.

The greater political socialization of girls in rural areas in comparison with boys in rural areas is perhaps due to expanding education and greater political awakening among rural girls. Parents in rural areas are now anxious to get their daughters educated up to secondary or higher secondary as in case of their sons. Education among girls in rural areas is expanding because of the opening of separate schools for girls.

In Table 3 are given the mean of political socialization, standard deviation and difference of means, critical ratio and level of significance of all the boys and girls in rural and urban areas. Another hypothesis of this study was that there was no difference between the political socialization of rural and urban students. But it is clear from the table that the mean of urban boys and girls is 10.67, which is more in comparison with the mean of rural boys and girls. The mean and standard deviation of rural boys and girls are 159.58 and 26.61, whereas the mean and standard deviation of urban boys and girls are 170.25 and 29.29. The political socialization of rural boys and girls is more towards stabilization in comparison with the political socialization of urban boys and girls because the standard deviation

TABLE 3
Development of Political Socialization between Total Rural and Urban Students

Students	Number	Mean	Standard Deviation	Difference between Means	Critical Ratio	Level of Significance
Urban Boys and Girls	500	170.25	29.29	10.67	6.06	.01
Rural Boys and Girls	500	159.58	26.61			

TABLE 4
Development of Political Socialization of Total Urban and Rural Boys and Girls

Students	Number	Mean	Standard Deviation	Difference between Means	Critical Ratio	Level of Significance
Boys	500	160.36	26.93	4.92	2.79	.01
Girls	500	165.28	29.06			

tion of rural boys and girls is less than that of urban boys and girls.

The means of the boys and girls of Government schools in urban and rural areas are 160.46 and 159.58. The difference between these two means is only 0.88. The negligible difference between these two means clearly indicates that there is no difference between the development of political socialization of urban and rural boys and girls.

But the mean of scores of boys and girls of aided institutions is 171.95, which is much greater than that of boys and girls of government institutions both in urban and rural areas. On the basis of the scores achieved by the boys and girls of aided institutions, it can be said that there is a good academic environment in these institutions and co-curricular activities go on throughout the year.

On finding out the difference between the means of urban and rural boys and girls we get the value of CR as 6.06. Thus, it is clear that this difference is meaningful at .01 level. On the basis of the results achieved we can say that political socialization of rural boys and girls is less in comparison with that of urban boys and girls. Our first hypothesis that there is no difference between the political socialization of urban and rural students is rejected on the basis of the results achieved.

To test the third hypothesis that there is no difference in the development of political socialization of boys and girls, a questionnaire was administered to the similar number of boys and girls of the schools of urban and rural areas. Table 4 shows the higher mean of the girls as compared to that of the boys. The combined means of the boys and girls are 160.36 and 165.28 and the difference of these means is 4.92. The previous table shows that the mean of the scores of political socialization of the girls as compared to that of the boys is higher in all the schools except the aided urban schools (urban Government schools and all rural school students). The critical ratio is 2.79 which is significant at .01

level. This level of significance clearly shows that this difference in the political socialization of boys and girls is statistically important. As such, it can be inferred that political socialization is higher in girls as compared to boys and the second hypothesis that there is no difference in the political socialization of boys and girls is rejected on the basis of the inferences obtained.

The previous tables and the present table reveal that the standard deviation of boys as compared to girls of all types of schools (urban Government and aided and rural schools) is lower. The standard deviation of all the boys and girls is 26.93 and 29.06, respectively, so the low standard deviation of the boys in all the schools indicates low dispersement and stability of their political socialization.

Generally it is regarded that the political socialization of boys is higher as compared to that of girls but the findings on the basis of the obtained statistics are just contrary to this view. The reason for this inference may be the feeling of girls to surpass boys in all the fields of life. Today in all the fields girls are leading and politics is no exception to it. The role of the mass media (newspapers, radio, television, etc.) available at home in developing political consciousness in girls is positive.

Thus, inferences regarding political socialization are:

1. As regards political socialization of boys and girls of urban Government schools, the mean of the girls is 8.93, which is higher than that of boys.
2. The mean of boys in aided urban schools is 1.90, which is higher than that of girls.
3. In case of students of urban Government and aided schools, the mean of aided schools as compared to that of Government schools is 11.49 higher.
4. As regards political socialization of all urban students, the mean of girls leads that of boys by 4.60.
5. In case of rural students, the mean of girls is higher than that of boys, the difference being 3.64.

6. The mean of political socialization of urban students is higher by 10.67 as compared to that of rural students.
7. When the means of political socialization of all the boys and girls are compared, girls lead by 4.92.
8. In the development of political socialization it was found that, excepting urban aided schools, the mean of girls as compared to that of boys of all urban and rural Government schools was higher and the mean of urban students as compared to that of rural students was also higher.

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TO OUR CONTRIBUTORS

JIE invites articles/papers on the impact of educational research on classroom practices and policy decisions. Specific examples where this impact is apparent may be given.

GENERAL EDITOR

The Child at the Centre of Education: A Developmental View

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EDUCATION, as field of inquiry as well as practice, is very easy to verbalize about if not understood. Its inherent beauty is that the more it is understood, the less it is grasped. Even the various parameters of a simple term like 'childhood' cannot be precisely specified. The so-called principles of teaching, which have acquired natural status over the years, hardly clarify anything psychological when it comes to the teaching-learning process in our day-to-day classrooms. The record of the contribution of educational psychology to the development of education over a period of 100 years or so is least flattering. The clerical system of education has done a lot of havoc both to our educational system and the natural development of children. Historically speaking, we missed the first industrial revolution. We now need not miss the second industrial revolution which has been knocking at our door-step for the last several years. Here, undoubtedly, our success depends upon the quality of mind developed at school. Our present-day teaching-learning process has to be simply reversed. It has to be based upon the processes of thought rather than its products;

and that too in an open frame of reference. In other words, questions and answers have no longer to remain fixed for years as is the case today. The whole teaching-learning process has to be characterized by firmness, dynamism and discovery at the same time, resulting in the self-learner who is his own boss in disciplined imagination and thought as well as action. To that extent, he becomes an enlightened soul charting his own course away from his own immaturity within the Gestaltian context of integration with other variables, say, intellectual, social, cultural and the real world of work.

The developmental view of learning, if taken seriously, is an alternative, rather anti-education system which has been talked about and advocated seriously, at least for the last twenty years or so. Its greatest exponent in this century was Jean Piaget of Switzerland. According to Piaget, child is essentially active. It is in his nature to learn. Nay, it is in his nature to go on learning and learning as well as refining his ideas continuously. He distinguished between development and learning but, at the same time, he, in his scheme, subordinated learning to development.

Any normal child in his view is quite capable of forming sound scientific and mathematical concepts. Relevant logico-mathematical structures develop as naturally in him as, say, learning to walk. For the latter type of learning, he need not be aware of the laws of locomotion. Failure, of course, is there in abundance but it is immaterial. Why? The reason is that he is in a position which is going strong every moment, for he does succeed in rectifying his mistakes and thereby master his failures in the end. He thus becomes quite capable of using his own reasoning faculties for solving problems in his own environment. It is not all a case of nasty step towards self-education, the chief distinguishing characteristic of any first class educational system anywhere in the world. This continuously reasoning individual is not at all a lonely figure or a cold-blooded creature. His view, on the other hand, is that maturation, experience (both physical and mathematical), social interactions and equilibrations (each one higher than the other) play their role in spontaneous development. Let us, therefore, concentrate only on Piaget here.

Man and His Works

The work of Jean Piaget (1896-1980) is little known in this country. There are many reasons for this, the chief being that he wrote profusely only in French. Secondly, he was a very difficult author to understand because he took too much knowledge for granted on the part of his readers. Thirdly, having been trained as a zoologist, he developed imaginatively the biological theory of knowledge for which he developed his highly specialized vocabulary drawn from his own intensive investigations on mollusks: organization, adaptation, reversibility, self-regulation, cognizance, equilibration, etc. Over the sixty-year period, he wrote about 50 original books and over 1500 monographs, papers and articles. He observed his own children closely, played marbles with other, and, using a semi-scientific method, traced the origin of several diverse universal contents. He did not stop at this but, con-

trary to the tradition of John Locke, David Hume and I. Kant, attempted to provide experimental answers to the age-old philosophical questions about the nature of knowledge. It is of interest to point out here that these problems were raised right from the times of pre-Socratic philosophers which he attempted to solve in his own unique way. He, thereby, founded a new branch of knowledge called experimental epistemology. The philosophers of the day did not acknowledge him as a person of their tribe and, in retaliation, he did not regard himself as the one interested in psychology, education and children. As controversy on controversy ensued, he contributed abundantly to the whole field of psychology: perception, reasoning, intelligence, dreams, moral development, space, time, play, thinking from early childhood to late adolescence, physics, mathematics, biology and logic. Some of the well-known books authored by him are: *The Language and Thought of the Child*, *Child's Conception of the Physical World*, *The Origin of Intelligence in Children*, *Logic and Psychology*, *The Growth of Logical Thinking from Early Childhood to Adolescence*, *Genetic Epistemology*, *Insights and Illusions of Philosophy*, *The Origin of the Idea of Chance in Children*, and *The Grasp of the Consciousness*. Nobody, even beyond a few kilometers away from Geneva in Switzerland, really understood the full import of his works. It is of interest to mention here that almost the whole credit of compiling the allied works on Piaget in several volumes goes to an Indian couple: Sohan Modgil and Celia Modgil currently based in England.

Some More Reflections

The ancestry of his work can be traced to early intelligence testing in Paris, France, by Simon and Binet. Accidentally, he discovered there that pupils' errors on intelligence test items provided substantial clues to understanding the nature of intellectual development. In his entire work, he did not care to determine the reliability and validity of his experimental tasks used for studying

Intellectual operations. Instead, he designed his own symbolic logic for studying them genetically. In his work, he raised the status of an ordinary child to that of an universal child. As already hinted at, his technique of collecting data was too slack and shoddy. Equally true was his method of recording and presenting data for which he hardly touched any statistics far beyond frequency, mean and percentage. In his work, he did not make use of high speed computers which invariably is the practice today in carrying out scientific research. Still, he succeeded to relate the findings of his diverse studies to the origin of knowledge via the pupil's mind, for he took the growth of epistemology seriously. In sum, he provided insights into the varied ways the universal child goes about the business of developing his own incomplete house of knowledge. He was careful enough not to take any definite position on the nature-nurture controversy. Without meddling with the word 'creativity', he explained how the human mind goes on creating novelties, each more exciting than the other, over the years. He also believed that a teacher cannot give an idea to his students and, thus, distinguish between false knowledge and true knowledge. It is perhaps in this context that John Holt in his book 'How Children Fail' talked about the differences between dull children and bright children studying in the highly expensive schools of America. According to him, dull children forget before the examination and bright children after the examination. In the Piagetian context, on the other hand, teaching means creating situations in which the underlying structures or concepts are pupil-invented through exploration. Unlike L.S. Vygotsky and J.S. Bruner, Piaget did not believe in the acceleration of mental development. He, therefore, stressed education for understanding, problem-solving and finding. He appeared to be silent on punishment, reward and motivation. Selecting cognition as the fundamental variable for intensive scratching, he showed that action is the basis of all knowledge

which is replaced continuously by a series of continual reflection inside the head of the growing child. Learning by doing alone is inadequate if it is bereft of learning by thinking or reflecting. The everlasting nature of his work backed up by hard evidence can thus be appreciated. To illustrate, a child is not simply a scaled down adult because both see the same thing in a different way. Childhood is, therefore, not a necessary evil which is to be tolerated at any cost. Nay, it is an inseparable part of the whole development as understood logically by the adults.

Stages and Success

Intelligence, according to Piaget, develops in four stages. These are: sensory motor (0-2 years); pre-logical (2-7 years); concrete (7-11 years), and formal (11-15 years). Before his death, he hinted at the possibility of a fifth stage which extends from 15-20 years and takes into account aptitude variations as well as highly varied individual career commitments. This stage is now seen against the less prominent, general intellectual development of the preceding stages. Returning to the first stage, it is of little educational significance but, at the same time, the foundation of practical knowledge or pre-verbal learning is laid here. Minus language, his mind becomes truly inventive during this stage. Thinking during the second stage, resting, of course, on the first stage, is transductive. In other words, it is from particular to particular without underlying any generality. Thinking here is self-centred because a child makes judgement the way he sees the situation. At the third stage, his thinking is dominated by the reality or the content of the situation. At the fourth stage, the earlier situation is simply reversed and the adolescent pupil lives in the world of possibilities and ideas. He is now in a position to set up all sorts of hypotheses and test each of them experimentally through control experiments. He is, thus, in a position to pick up the various elements of scientific methods. Piaget does not stop here, for he succeeds to hook the various scientific patterns of thought to the

origin of knowledge as seen historically. In this widest theoretical frame of reference, he also enunciated conditions under which thought moves from the lower stage to the higher stage of development. It is interesting to note that in the early stage of his work, he literally ran away from psycho-analysis. But towards the fag end of his life, he did explain how conscious, pre-conscious and unconscious hang together.

Understanding of the World

There is distinct difference between child thought and adult thought. Let us now mention briefly how the child begins to look at the world within the framework of nine universal contents

which possess universal interest and appeal. Due to the paucity of space, let us confine the scope of discussion only to the first stage and the fourth stage of intellectual development as propounded by Piaget is:

1. Action
2. Object
3. Space
4. Time
5. Causality
6. Play
7. Imitation
8. Self
9. Language

The Growth of Nine Universal Contents			
S. No	Contents	Sensory Motor Stage	Formal Stage
1.	Action	Representational thought emerges from reflexive physical actions	It operates in a wider context and is a function of the Piagetian logic, say, combinational, propositional and INRC group. It is a kind of idealized situation
2.	Objects	Initially, there is no concept of permanent objects. It develops during this stage. Objects no longer disappear even if these are out of mind too.	Conservation is superseded. Instead, thought becomes hypothetic-deductive in nature. It is a function of the Piagetian logic, namely, combinational and propositional.
3.	Space	There is no concept of space in the beginning. Immediate space is conceptualized at the end of this stage	It now appears as relative space.
4	Time	The concept of time as such does not exist at the beginning of this stage. However, there is conceptualization about short intervals or sequence of durations: tea time, meal time and play time.	It now appears as relative time
5.	Causality	Initially, there is no concept of cause and effect. However, towards the end of this stage, there is conceptualization of simple cause-effect relationship.	Idea now is tested through controlled experimentation, for example, exclusion of variables.
6.	Play	Symbolic play appears at the end of this stage from the repetition of reflexive activities	It gives way to reflective abstraction and hypothetical thought
7.	Imitation	First deferred imitation appears from reflexive activities	It gives way to reflective abstraction and hypothetical thought.
8.	Self	There is no concept of Self as such in the beginning as it stands merged with the environment. However, there develops gradual consciousness of differentiation of self and others	Reduced ego-centrism gets further reduced. Instead, ideal self appears.
9	Language	First language appears when there was none in the beginning.	Practical language gives way to abstract language

A few comments here are quite relevant for elucidation purposes. First, the child uses the various parts of his body in learning: hand, arm, feet, ear, head, tongue and nay, even the skin. He tries to draw full benefit from various motor reactions in his perceptual field. He tries to lay his hands on anything which is within his reach. These are in a way his technologies or means of acting on things and objects. To illustrate, he has not to be taught how to put his fingers into the hole of a towel or a handkerchief. Why? He does the entire operation unaided. Problems, however, arise when he tries his hand, say, on bottles, locks and power plugs. At this stage, care as well as caution by the adult is a must. At the same time, he still retains the option and is in a position to communicate with others. Thus elucidated briefly is the Piagetian concept of action. From this initial learning obtained on his own, the child is able to expand his efforts not only within a given set of situations but across the other dissimilar situations too. He continuously goes on learning and re-learning ceaselessly. In fact, his progress is endless in all directions but stands little documented in literature. The point not to be missed at all is that the idea in the head of the individual child is fully free to go anywhere and develop itself in any way it deems fit depending upon the passionate pursuit of the individual concerned. If it happens: he no longer than develops problem-solving strategies haphazardly and inefficiently. Here, the Gestaltian advice is: Teach organically. Let us now quote some research findings on the formal stage in the form of key statements.

Some Key Statements

It is difficult to review all researches in this area. Some reviews are already available. It is not easy to interconnect the findings firmly because of varying objectives, tasks, samples, tools and tests and the modes of interpretations. All these findings when consolidated boil down to the following conclusions:

- (a) The human mind is highly dynamic. It acts on its own and thus possesses quite a bit of spontaneous thought. It is a readily available reservoir of continually developing thought which, on close reflection and controlled experimentation, can be used easily for the development of various concepts underlying several school subjects.
- (b) The concrete operational stage is quite dominant among normal adolescent pupils. Whereas adolescent pupils are in a position to set up hypotheses, they are not in a position to test them. In other words, their minds have not yet become experimental. Further, they are also not in a position to exhaust all the possibilities or combinations and permutations. At best, they can test one variable at a time in most of the cases.
- (c) They stick to their thought firmly. They also enthusiastically prefer to test their ideas in the first instance. When compelled to think, their erratic individual processes of thought appear to suffer hump(s), before individual concepts finally settle down in their individual heads.
- (d) There appears significant relationships between the scores on formal thought and the several outside variables, namely, mental age, grade and age, some personality traits, socio-economic status and the type of school management, sex differences favouring boys in problem-solving exist but these need to be studied in relation to race, country, religion, region, rural/urban divide and varied conditions of schooling. Here our limited observations are:
 - (i) There are no sex differences in problem-solving if boys and girls are treated equally at home.
 - (ii) There are sex differences in problem-solving favouring boys, if boys and girls belong to backward areas of the region or districts.
 - (iii) There are no sex differences in problem-solving if both boys and girls belong to the

bottom group. In the top group, they try hard to succeed and equalize their performance.

However, there is a general tendency to think maximally among all adolescent pupils on the Piaget-type tasks. These tasks definitely fire their imagination for quite a long time.

- (e) It needs to be stressed that different school subjects demand varying amounts of formal thought. Mathematics and physics demand the maximum. Secondly, the role of past experience and hints and clues is little understood in problem-solving. Hints and clues only favour those who are at the transitional stage of mental development, that is, between the concrete stage and the formal stage. Thirdly, whereas a problem is solved in stages, it is at the same time very difficult to specify sharply the parameters of these stages. The concept of stage simply serves a practical end from the teachers' point of view.
- (f) The very language of Piaget as well as of the Piaget-type tests is deceptive. It is, therefore, essential to establish equivalence among the various tasks empirically. Otherwise, it is difficult to reconcile contradictions in various findings. For example, a problem supposed to be formal may turn out to be a concrete one and vice versa. Secondly, there is seen a sufficient time lag between the experimental solution and the formal solution.
- (g) Like Piaget, teachers should listen more and more to the inaccurate answers of their pupils. On the basis of knowledge thus gained, they would be in a position to improve their strategies and tactics of teaching. Secondly, it takes time for schemes of thought to develop. In fact, their development from year to year is too gradual, laborious and slow. However, content and instructional intentions are some of the factors which definitely influence learning. Thirdly, self-learning and pupil-to-pupil in-

teraction in class may be encouraged and search be made for promising results, if any. Pupils may thus open up in their own learnings unaided. Lastly, pupils use words metamorphically. Our lack of knowledge about where to hammer at rather than go on hammering all the time makes access to the child's mind difficult.

- (h) Psychometric and developmental studies on intelligence have yet to converge. There are a number of cobwebs yet to be removed from the theoretical point of view. It is worthwhile to explore whether there is a distinct possibility of a fifth stage to appear on the scene. Its existence had been hypothesized by Piaget towards the end of his life. It would then take care of aptitude variations and career commitments on which Piaget had little to say in his writings.

The role of the teacher as an agent of intervention stays but in an entirely different context, the context being the framework for facilitating learning as propounded by the National Education Policy of 1986 where the teacher no longer acts as if working at an academic pump. In other words, when the developmental view to learning is kept at the focus, children not only enjoy varied learning but also work to their capacities fully. Unintendedly, the present-day teaching process also gets decentralized for new stimuli rather than responses also get mastered over the years. This is, interestingly enough, also advocated by the National Education Policy.

Impact and Evaluation

It is, thus, strange that the Piagetian system of thought had little to say on education. True, it does not generate variable as well as testable hypotheses via psychometry. But his work is supported in principle far beyond the borders of Switzerland including India. Any piece of psychological research conducted anywhere in the world remains out of tune without reference to his work. He safely pushes aside the basic positions of stalwarts like Sigmund Freud, J.B. Watson,

B.F. Skinner, Max Wertheimer, L.S. Vygotsky, J.S. Bruner and Kurt Lewin. He thus occupies the topmost position in the field of developmental psychology. It is, therefore, least surprising that his work has evoked simultaneously widespread acclaim and ridicule. Taking an overall view, one would have heard little of the science curriculum improvement project in the USA, and the Nuffield Science projects for the youngsters as well as 5/13 science project in the UK. In Australia, K.F. Collis and J.B. Biggs would have been in a pretty difficult position while developing a SOLO Taxonomy (structure of Students Learning outcomes) nearly at par with Bloom's Taxonomy. At home, the writer would not have worked on the factorial structure of adolescent thought within the developmental context for years; run an individually accelerated science teacher education project; developed a Science Teacher Behaviour Inventory; and hinted at the existence of Hump effect during problem-solving when substantial departures are observed within his general development of logico-mathematical structures. And the Modgal couple would have been hammering at something else in England. It is easier to see the relevance of several educational ideas and projects currently at work in our country. Examples of such projects are: The Hoshangabad Science Teaching Project in Madhya Pradesh; The Mirambika Experiment at the Mother's International School, New Delhi, and the regeneration of the Pushkar Valley Lakes system in Ajmer in which education, development and employment are interhooked firmly.

If to study knowledge is to study man, our knowledge about the human mind then stands highly enriched abundantly because of the Genevan works characterized by speculation as well as slipshod experimentation. He founded experimental epistemology in the true tradition of scholarship trailed earlier by the greatest philosophers of all times, namely, Socrates, Plato and Aristotle about 2500 years ago.

Final Remarks

It is, therefore, in the fitness of things to read about such a great thinker who lived passionately for his subject. In his own time, he virtually defined the whole field of cognitive development. Why? The answer is that he was a great polymath who did not at all hesitate asking big questions and that too in the right order, considered definitely out of reach by psychology in his times. He provided experimental answers to the age-old philosophical questions. It is worth reiterating that failure in science is not a rare event. At the frontier of knowledge, one has to suffer being a joker at times when, initially speaking, it comes even to suggesting, say, relationships between experimental epistemology and the entire range of human sciences. Unfortunately, it is everybody's impression that it is very difficult to read the Piagetian works. If read, it is very difficult to understand them; if understood, it is very difficult to write about them; if written about, there are misinterpretations galore. So to read him is to misread him. To understand him is to misunderstand him. To interpret him is to misinterpret him. And to judge him is to misjudge him. In sum, not to reflect on his works is to court mediocrity, for he is trying to say something quite different and perhaps valuable too.

He focussed clearly in his works on the life of the mind. He explained clearly why children given responses to his questions as they do. He viewed learning as a fascinating struggle to be enjoyed and how it leads to restructuring of knowledge in an open frame of reference. And how, it is within the realm of possibility for practising school teachers, to enrich and reconstruct school curricula imaginatively on the cheap; and that too, at the input level. Children are reasonable, capable and clever problem-solver too. When grown up, they shape scientific thought marvelously in their own unique ways.

Since Piaget is now dead, he can be evaluated quite objectively. Each critic, whether he agrees with him or not, acknowledges the greatness of

his works. The whole benefits are ours if he is unseated from his present position of prime importance by somebody's superior challenge. But it is in the nature of the Piagetian journey which lets any one work ahead productively in thousand different ways in one's own area of professional freedom. Until such an historical hammer falls on Piaget, we should continue reading and reflecting on his works. Nay, his works may be replicated and tested at their weakest points experimentally. It is precisely this Henri Bergson, in *Creative Evaluation*, talked of when he said To exist is to change, to change is to mature, to mature is to go on creating oneself endlessly.

Lastly, when the child is placed at the centre of education firmly, it is advised that everything be not pre-determined for him. The scales of teaching, learning and testing of environmental experiences including experimentation need to be tilted firmly in his favour. In other words,

children need to be given a lot of say in their own development and education. Otherwise, our efforts are going to be counter-productive in every possible way. Raising percentage of achievement, though desirable, is not going to solve our educational problems. We have accomplished our job if we help children to help themselves.

Let us remember what the Chinese philosopher Lao-Tse said:

If I don't drive among people they look out for themselves
If I don't preach at people they become themselves
A leader is best if people hardly know that he exists.
A leader is not so good if people obey him and cheer him.
A leader is worst of all when they scorn him
About a good leader who says little, when his work is done and his goal achieve, they will all say "we did it ourselves"

And this is what Confucius, Buddha, L.S. Vygotsky, Gandhi, Tagore and Vinoba, a few out of the many, have been hammering at for years in their working lives.

Women and Education in the Philippines

SARINA PARANJAPÉ

PERVASIVE disparity in the access to educational opportunities between sexes in the Third World continues to be a matter of great concern. It is increasingly being recognized that mere availability of educational facilities does not by itself ensure female participation and that women's education is dependent on other factors as well (Smock, 1981; Bowman and Anderson, 1982). Parents, for instance, base their decision to educate their daughters upon their expectations and perceptions of the effects of schooling on them: in terms of their procuring employment, acquiring suitable husbands, and their future roles as wives and mothers. The gender-specific nature of most of these "considerations" suggests that women's education demands "differential" investment and decision-making (from that of men) in the household.

The Philippines belongs to a small minority of developing countries that not only have a significant female representation at all stages of education, but also considerable parity in educational involvement between sexes. With an impressive female literacy rate of 82.2 per cent as of 1970 (males = 84.6 per cent) the Philippines has achieved what most countries sharing its level of development haven't. The question then is how did the Philippines make such remarkable strides in women's education, considering that it too, like most of the developing nations, is basi-

cally an agrarian economy and is plagued by problems such as poverty, overpopulation and unemployment.

Moreover, the Filipino society is also riddled with gender-based inequalities in almost all spheres of life. What is it in the socio-cultural milieu that favours female educational participation to this extent? This paper hopes to discern some of the reasons responsible for significant female representation, in addition to providing an overview of women's education in the Philippines.

Education of Women in the Philippines

Literacy

Literacy is an indicator of access to education and is usually defined as the ability to read and write. The rates of literacy for women in the Philippines went up from 70.6 to 82.2 per cent from 1960 to 1970, as opposed to 73.6 to 84.6 per cent in case of males. Though the difference between urban (91.8 per cent) and rural (77.2 per cent) rates for women is significant, it is only a little larger than that between urban (93.9 per cent) and rural men (80.2 per cent). The sex differences in literacy rates are thus not very large, at least not to the extent that is seen in many developing countries (Table 1).

TABLE 1
Literacy Rates of Population Aged 15 Years
and Over (in %)

	Both Sexes	Males	Females
Philippines (1970)	83.4	84.6	82.2
India (1971)	29.45	39.45	18.69
(1981)*	36.23	46.89	24.82
Botswana (1971)	40.7	37.1	45.5
Egypt (1971)	43.5	58.8	29.0
Haiti (1971)	23.3	28.7	18.4

* India, Ministry of Human Resource Development, 1988,
National Literacy Mission, New Delhi, page 7

Source: 1979 Demographic Yearbook, United Nations,
Special Topics, Population Census Statistics

Enrolment

Education in the Philippines consists of three levels: first level or elementary level that lasts for six years; second level or secondary level which lasts for four years; and third level or collegiate/tertiary level, most programmes in which lasts for four years. The average age for entering school is seven years (Law and Population in Philippines, 1975, p. 149).

Elementary education is deemed compulsory by the 1987 constitution of the Philippines. It is free in all public schools (Law and Population in

the Philippines, 1975, p. 152). Almost two-thirds of all children in the age-group six to fourteen, as of 1970, were enrolled in schools. Females have a slight advantage over males in terms of numbers enrolled (64 per cent vs. 62 per cent) (Rojas-Alela et al. 1977, p. 96).

Though high enrolment at the elementary level is marred by the high drop-out rate in the 15-24 age-group, sex differences in participation are virtually insignificant.

It is interesting to note that the percentage of pupils enrolled peaks at age 11, i.e. 86 per cent of all boys and girls aged 11 years were enrolled in school (as of 1970). More 11-year-old girls (87.1 per cent) than boys (84.9 per cent) were enrolled. By age 17, however, there is a drastic drop in enrolment, and at age 24 only a small percentage are receiving education (Table 3).

UNESCO (1983) reports additional findings: in 1980, 49 per cent of the pupils enrolled in the 7-12 age-group (first level) and 53 per cent of those in the 13-16 age-group (second level) were female. The mean of these two groups (51 per cent) represents slight domination of females at the school level (Table 4).

The female preponderance continues at the College level as well. UNESCO (1983), for

TABLE 2
Percentage of Children (Aged 6-14) and Youth (Aged 15-24) Attending School, by Sex and Region

Region	6-14 Years			15-24 Years		
	Both Sexes	Males	Females	Both Sexes	Males	Females
Philippines	63.0	62.1	64.0	28.7	29.5	27.9
Manila	74.1	74.1	74.1	46.5	50.6	43.2
Ilocos/Mt. Province	66.1	65.4	66.2	34.1	35.7	32.5
Cagayan Valleys/Batanes	63.9	62.3	65.7	30.4	30.1	30.6
Central Luzon	69.2	69.0	69.4	28.6	30.5	26.9
Southern Luzon	66.9	66.3	67.5	26.7	27.5	26.0
Bicol	63.5	62.4	64.5	26.3	26.8	25.7
Western Visayas	62.2	60.5	63.9	26.7	28.0	28.8
Eastern Visayas	57.8	55.6	58.3	23.2	22.7	23.6
Northern Mindanao	59.7	58.5	60.8	27.9	27.2	28.5
Southern Mindanao/Sulu	54.9	54.2	55.7	24.3	24.8	23.9

Source: As reported in Rojas-Alela et al. 'A Profile of Filipino Women', 1977

instance, reports that as of 1980, 53 per cent of the pupils enrolled at the third level were female (Table 4). Moreover, "Women seem to have the greatest edge at the highest levels unlike other countries where female enrolment declines at each successive stage" (Smock, 1981, p. 72).

TABLE 3
Percentage of Children Attending School
by Sex and Age

Age (years)	Both Sexes	Males	Females
7	34.8	33.2	36.4
11	86.0	84.9	87.1
17	38.8	39.5	38.1
24	7.2	8.2	6.3

Source: United Nations, 1979, *Demographic Yearbook, Population Census Statistics*

TABLE 4

1980	First Level	Second Level	Third Level
Duration (years)	6	4	—
Official Age-range	7-12	13-16	—
Pupils enrolled	8,033,642	2,928,525	1,276,016
of which female %	49	53	53

Source: Based on Data from UNESCO Statistical Digest, 1983, p. 230

Selection of the Course of Study

Women, while well represented at all stages of the educational system, do not choose the same specialities as do their male colleagues, particularly at the post-secondary level. Consequently, as UNESCO's 1979 figures on College graduates illustrate (Table 4), women dominate disciplines such as Education and Nursing. Castillo (1979) has also presented evidence showing the preponderance of females in Education, Foods and Nutrition, Dietetics and Nursing, and that of males in Engineering and Technology, Agriculture and Natural Sciences.

The enrolment in private vocational schools does not escape sexual stereotyping either. Rojas-Aleta et al. (1977) found that most female students opt for beauty and fashion courses while males choose technical courses. Inciden-

tally, such patterns of enrolment are similar to those seen in most Third World countries

TABLE 5
Graduates by Level and Field of Study (1979)

Fields	Males and Females	Females
Total for all fields	189,131	102,636
Education, Science and Teacher Training	9,440	7,552
Humanities, Religion, and Theology	—	—
Fine and Applied Arts	788	205
Law	2,123	505
Social and Behavioural Sciences	—	—
Commercial and Business Administration	38,109	22,103
Mass Communication	—	—
Home Economics	1,507	1,447
Service Trades	—	—
Natural Sciences	11,212	7,238
Mathematics and Computer Science	—	—
Medical and Health Related Science	17,712	15,409
Engineering	18,247	2,941
Architecture and Town Planning	—	—
Trade, Craft and Industrial Programmes	77,247	40,091
Transportation	—	—
Agriculture, Forestry, Fisheries	7,122	3,491
Other, non-specific	5,489	1,654

Source: UNESCO Statistical Yearbook, 1983 ed.

Women have begun invading the previously male preserves such as Commerce, Business Administration and Chemistry. Smock (1981) in her study of enrolment patterns found that 69 per cent of the enrollees in Chemistry and 93 per cent in Pharmacy were female. However, such "invasions" are very much the exception when compared to the rest of the female students whose choices are strongly influenced by the traditional sex-role stereotypes, that of the woman being the wife and the housekeeper and the man being the breadwinner and the provider (Smock, 1981). Unfortunately, these stereotypes are perpetuated even in the curricula at all stages of education (Neher, 1982) and tend to influence self-perception

of schooling (and credentials) as a form of social mobility which is reflected even today, paid rich dividends. Most Filipinos see education as a passport to a better future. Education represents an investment towards a better life, greater self-respect and social esteem (Castillo, 1979; Smock, 1981; Rojas-Aleta et al. 1977; Foley, 1984).

Several studies reflect that expectations from education vary with SES, age and residence. For instance, Castillo (1979) reports results from National Surveys which reveal that the youth, both boys and girls, value education as a necessary ingredient for success. Parents see their children's education as an investment for their own future: a source of security for old age (Smock, 1981). For those who live in rural areas, college education facilitates rural to urban transition and is the avenue to other occupations and good living (Castillo, 1978, 1979). In any case the credentials themselves have an inherent prestige value that automatically uplifts the social status of their recipients.

Of course parents may educate sons and daughters differently, and for different reasons, e.g. many parents may be willing to provide education, especially college education to their daughters only because they regard it as an extended preparation for their future roles as wives and mothers or because they see it as a way of keeping them gainfully occupied (until their marriage).

Nonetheless, what makes the Filipino situation unique is that families do not usually wish to discriminate between educating sons and daughters. They would rather educate those perceived to be "bright" than base their decision on the gender of the child unlike the Indian sub-continent wherein premium is placed on the education of the sons (Castillo, 1979).

In most developing countries, being female in itself is the major stumbling block in the path of women's education. The practice of female seclusion and parental perceptions regarding the nature and roles of females often prevent women from availing of educational opportuni-

ties. In the Philippines, however, apart from the orthodox Muslim Communities, female seclusion is rarely practised. Most parents allow their daughters to attend the largely co-educational facilities. Moreover, in the Filipino context, parental beliefs regarding the nature of girls such as their being morally superior, more conscientious and reliable than boys may actually have an educational analogue (Monteil and Hollnsteiner, 1976), and in turn promote female educational participation.

The impressive female educational involvement cannot, however, be attributed to these reasons alone. Certain features of the Filipino cultural heritage, e.g. the tradition of familial obligations, especially towards parents, perhaps induces parents to welcome the education of their daughters. Children are expected to take care of their parents in old age. In addition, older born children irrespective of gender are expected to assume responsibility for their younger siblings or their sibling's children (Castillo, 1979). Interestingly, daughters are also viewed as more willing and faithful than sons in sharing their savings with the family (Trager, 1984). Such help can extend even after the daughters get married because of another element of Filipino society, the bilateral descent system which ties daughters to their parents even after their marriage. Thus, some parents may consider educating their daughters as a better investment for their future because they could rely more on them than their sons for support in old age (Smock, 1981).

While not all educated women are reported as employed or looking for suitable employment, it has been observed that a woman's chances of employment almost double with college education. This, in fact, may motivate parents to educate their daughters as much as they can, because even if she is unable to continue helping them (financially) after her marriage she may at least be able to supplement her husband's income, and thus be a "better" wife and mother.

Another characteristic of the Filipino socio-cultural milieu that may play a role in fostering

female schooling is the pervasive system of social networks. As mentioned earlier, relationships of mutual obligation and reciprocity (*Utaang na loob*) are particularly important between parents and children and between siblings. However, this assistance does not apply only to the immediate family members, and can extend to other relatives, both collateral and lineal, and friends (Trager, 1984). Uncles, aunts, nunces, nephews and cousins are very much part of these reciprocal assistance patterns.

Similarly, the phenomenon of fosterage wherein kin and non-kin relationships serve in highly supportive roles and provide substantial help to the household by assuming some responsibility towards its children may directly or indirectly contribute towards enhancing female enrolment. It is not unusual to find children, male and female, staying with relatives in places other than their homes for education. In fact, Trager (1984) reports that migration in the Philippines is increasingly female dominant. In ad-

dition, Trager found that the majority of these females were young and migrating chiefly for education and employment.

To conclude, the advances made in female educational involvement and the overall parity between sexes are the result of the interplay between a multitude of factors, some of which have been discussed above. This paper suggests that apart from the favourable governmental policy and efforts, certain features of the Filipino socio-cultural environment may also foster female participation. Needless to say, the nature and the degree of the influence of these socio-cultural variables in promoting female educational involvement deserves further study. For instance, given the perceived economic benefits and the parental belief that daughters are more conscientious and reliable than sons in sending remittances to their families, the inextricable link between (female) education and employment needs to be examined in detail.

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Towards a Course in ELL: A Study of Academic, Social and Professional Needs of Commerce Students

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TODAY English has attained a unique position in the world. It has moved away from the status of a national and colonial language to that of a world language. Today there are more non-native speakers of English than native speakers "One in seven of the world's entire population is now able to use English either as his native language or as a second language, or as a language for some practical purposes—administrative, professional or educational" (Encyclopaedia Britannica, 1978: 874).

In India over 18 million people use English. According to Quirk, "India can be classed with Canada as the country with the greatest number of English speakers after the USA and the UK" (Kachru, 1983. vii).

English serves as a link language in a multi-lingual country like India. Many regard the English language as the only 'lingua franca' to integrate an Indian pluralistic society. Firth (1957: 55) more than three decades ago wrote, "The interesting thing is, however, the English continues to serve the best interest of India as an Indian language in the terms of the present constitution" The socio-politico-linguistic-economic-cultural nature of India makes it evident that for many

many years to come English has to play an important role in public administration, trade, commerce, industry, higher education, international affairs, international communication, diplomatic missions, etc.

Today in India businessmen have realized the importance of English in business communication because English is the only language which can be used for international business dealings. With the increased ventures of Indians in the world trade and industry, the study of commerce is becoming a highly specialized field, with openings in several avenues including Accountancy, Banking, Chartered/Cost Accounting, Cooperation, Dealership, Distributionship, Finance, Insurance, Management, Revenue, Salesmanship, Secretaryship, Taxation, Transport, Travel Agency, etc. These professions which require not merely knowledge of the subject but also a good command over English.

The study of English language needs of students of commerce and those in professions after their graduation in commerce confirms that they need English for academic, social and professional purposes.

The Present Study

The present research is based on the hypothesis that the needs of commerce students are not exclusively one or the other but include several. It was felt necessary to take into account both immediate as well as long-term needs. The medium of instruction at M.S. University, Baroda, being English their immediate needs would include academic and social ones, while more long-term needs would cover professional ones. It was felt that needs research in order to prove more useful must be extended in scope

1. to account for both short-term and long-term needs, and
2. identify priorities at different stages.

It is hoped that the outcome of this research may help in developing a communicative course in English for the students of commerce. This course would have to be 'need-oriented' and one that involves the learner in the act of learning. It has to be an English Language Learning (ELL) course and not an English Language Teaching (ELT) one. The present courses in English being offered to students of commerce are either 'content-oriented' taught as subjects like Economics, Business Organization, Management, etc. Therefore the present courses in English are not very different from what these students would have learnt in the school.

Tools

Two sets of questionnaires were constructed—one for the students and the other for the professionals. The tool for the students centres around academic and social needs. The tool for the professionals was considered necessary as they would be in a better position than the students to specify their English Language needs in their work situations. Language needs as indicated by the professionals could be considered the future professional needs of the students. Moreover, as the professionals were all commerce graduates and had been through the courses in English, their specification of needs as

realized in the work setting would have great significance.

The questionnaire for the students was intended to map information regarding the extent of English (spoken) by the students at home, college, class and office. Purposes for which the students used English (spoken and written) were noted on a five-point scale of 'frequency' ranging from 'very often' to 'never' and a three-point scale of 'importance' ranging from 'very important' to 'not important'.

The questionnaire for the professionals was designed to collect data on the use of English (spoken and written) in the office or outside the office on a three-point scale of 'frequency' ranging from 'frequently' to 'never'. The importance of English for the professionals (for speaking, writing, listening) for social and professional purposes was assessed on a three-point scale of 'importance' ranging from 'necessary' to 'not important'. Attitudes of the professionals to English were analysed under a three-point scale ranging from 'completely agree' to 'disagree'.

Both the students and the professionals were encouraged to give their suggestions (if they had any) at the end of the questionnaire.

Subjects

The sample of the study constituted the students of the first year Commerce in M.S. University, Baroda and those after graduation in Commerce engaged in different professions in and around Baroda.

The sample included a total of 300 students of the first year Commerce of 1984-85. The group was heterogeneous in terms of L1 and medium of instruction in the school and 100 commerce graduates drawn from various professions.

Students of seven different L1 (Gujarati 66%, Marathi 20%, Hindi 10.8%, Malayalam 1.6%, Punjabi 1%, Tamil 3% and Sindhi 3%) had studied through four different mediums of instruction (Gujarati 70.7%, Marathi 9%, Sindhi 3% and English 20%) in school. Students from

vernacular medium had had an exposure of 5 to 10 years of English in school.

Questionnaire 2 was administered to a sample of 100, the subjects, all commerce graduates and from different linguistic background, being drawn from various professions, Gujarati (60%), Marathi (25%) and Hindi (15%). They had studied through Gujarati (65%), Marathi (20%) and Hindi (8.5%) and English (6.5%) medium in school.

Procedure

The questionnaire was administered to the first-year students of commerce in M.S. University, Baroda, during English class. The researcher explained to the students the purpose of the questionnaire. The questionnaire was completed in 30 minutes.

The researcher personally visited the offices from where the samples of professionals were selected. The purpose of the questionnaire was explained to them in English, Hindi and Gujarati. The questionnaire could be completed in 15 to 20 minutes during the recess. Explanations on several items were provided in Gujarati, Hindi and English, depending on the request from different students and professionals.

Results and their Implications

The items that received an overwhelming response from the students are:

- use English both for academic and social purposes.
- speak and write in English for purposes of 'thanking', 'apologizing', 'requesting', 'complaining', etc.

These responses of students reveal that they consider the following skills very crucial for social and academic purposes:

- listening
- understanding
- speaking
- writing.

This indicates that students very definitely feel the need to use English. This seems to be projecting their attitude. Items in the questionnaire that received a high rating with reference to 'use' may be interpreted as a projection of a strong desire to use English. Analysis of the data reveals that professionals use English:

- in office
- outside office.

An overwhelming majority of the professionals stated that they speak in English with their:

- boss/superiors
- colleagues
- customers
- friends
- customers or friends who do not speak in their language.

Almost all the professionals mentioned that they use English for the purposes of:

- thanking
- requesting
- regretting, etc.

Majority of the professionals felt that the following skills are very important for social as well as professional purposes:

- listening
- understanding
- speaking
- writing.

All the professionals agreed that their ability to use English would enhance their:

- social image
- professional prospects.

Both English and vernacular medium students indicated a strong urge to attain communicative skills in English. All professionals acknowledged the importance of English for their self-development and professional growth. That needs are not restricted to academic ones but that they include professional and social has been confirmed. The findings reveal that social and professional needs have been given the same priority as academic needs.

All the students who responded to the question "what do you want your course in English

to include?" suggested that the course in English should help them develop their skills in:

- public speaking
- debating
- effective and efficient communication.

They also wanted the course in English to familiarize them with:

- the type of testing the competitive examinations have
- TOEFL
- professional and entrance tests

There was a suggestion from a few students for the inclusion of:

- literary writings of the Indian writers in English
- classics in English literature
- fiction, drama, poetry
- grammar

Similarly, all the professionals who took interest in expressing their opinions suggested that the course in English:

- should help them to improve their professional skills
- should enable them to speak effectively in English
- should take into account the fact that English is important for success in any profession.

Though reading skills for students and writing skills for professionals would be more specific to a teaching syllabus, the course in English should help them to develop their skills of speaking. As present courses do not include a component in the spoken English based on the premise that it is the most difficult skill to test, it would be desirable to provide ample opportunities for practice in spoken English and use it as a methodology for teaching other skills. This research clearly reveals that the learners, both students and professionals, place top priority on speaking skills.

The students want the course in English to help them in their academic activities and also to communicate effectively for social purposes

As the stress in other subjects related to commerce is content, students realize that academic

success can be sought despite poor knowledge of English. The enthusiasm for English is more for reasons of self-development. Therefore, this felt need persists through academic to professional life. This research calls for a skills-based approach in which

1. Reading will enable the learners to acquire necessary vocabulary and linguistic skills required to develop the skill of speaking.
2. speaking in English would facilitate English language learning.
3. developing the skill of speaking would be followed by writing.
4. distribution of time for training in each skill would be reviewed.

Conclusion

"Learner needs", as Widdowson (1983) has stated, "can refer to what the learner has to do with the language once he has learnt it..." However, the present course in English for students of commerce neither aims at developing short-term nor long-term needs of students. Therefore, the course in English designed for commerce students should aim at developing students' communicative skills in English. It has to help them to communicate effectively and efficiently in English in their academic, social and future professional situations. The role of English in India also demands that commerce students will have to equip themselves in communicative skills as the future could be more challenging than the present.

The present courses in English for commerce students are not much different from the earlier courses which paid scanty attention to the development of the communicative abilities of students. This is evident from the fact that even after eight to ten years of learning English in the school, students are not able to communicate in English. This is due to the shifting of emphasis away from the mastery of language use to the mastery of linguistic structure

It may not be advisable to retain at college level the kind of course in English which was

used in school. In school, English Language Teaching might have taken place, but there is very little evidence of any English Language Learning. However, if students are given exercises and drills to fill in the blanks, they will do them without any mistakes. As Widdowson (1978) has said, "drills and exercises for the reception and production of sentences tend to inhibit the communicative abilities ... and structurally graded passages do not match with language use". In school the rules of grammar were given importance and therefore students know the rules of grammar thoroughly. But they are unaware of the fact that "the rules of grammar" will be useless without "the rules of use" (Hymes, 1971).

This is the plight of a content-based course. Such a course only encourages students to learn

by role and when they get a chance to write or speak on their own they fumble. Therefore a course in English must be concerned with reality: "with the reality of learners as they exist outside and inside the class" (Littlewood, 1984:95).

Thus, it is important to give students what they need and not what the course designers and teachers want. There should be an English Language Learning (ELL) course rather than an English Language Teaching (ELT) course. Therefore it is essential to evolve a kind of teaching materials which will facilitate the learners to communicate for their immediate and future needs. The communicative approach to the learning of English can develop the 'capacity' (Widdowson, 1983) of students to communicate in English for academic, social and professional purposes, both with fluency and appropriacy.

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Teaching Composition

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THE importance of composition can never be overemphasized in an English Language Teaching programme at the school level. Therefore we as teachers of English must pay adequate attention to it. Teaching composition involves training of students not merely in expression but also in choice and organization of thoughts and ideas. It can thus be thought of as having the following two main aspects to it: (a) teaching how to select and arrange the material, and (b) teaching how to use certain linguistic devices to achieve coherence, make the piece stylistically elegant and effective, and the like.

Grice's theory provides the basis for the discussion of how composition has to be taught. In his extremely influential paper "Logic and Conversation", he spells out his theory of conversation. He postulates a principle which he calls the "Cooperative Principle" in order to emphasize the fact that the act of conversation involves cooperative effort; that it has a common purpose or a set of purposes and that it takes a mutually accepted direction which might be there from the start or which might evolve during the act itself. He further postulates four maxims and a miscellaneous one. These four are as follows: (a) Quantity, (b) Quality, (c) Relation, and (d) Manner. Quantity requires the participants in a conversa-

tion to make their contribution "as informative as is required"; that is, they must withhold no information as is required and provide no information that is not required. Quality requires the conversationalists to provide only those bits of information in support of which they have adequate evidence. Relation requires it of them that they make their contribution relevant at every stage of the interaction. Manner demands that the participants use clear, unambiguous language, and speak in a direct, straightforward way. Finally, the so-called Miscellaneous maxim calls upon them to obey social and aesthetic norms of verbal interaction.

In addition to the Cooperative Principle and the Maxims, Grice's theory contains implicatures which assign suitable interpretations to utterances which violate one or more of the maxims but not the Cooperative Principle. An example of the above is the following. Suppose A and B are professors of literature. A asks B's opinion on a recently published novel. All that B says is that the quality of print is good, and so are the binding and the paper. Now B violates Quantity and Relation both in not giving A an adequate and appropriate response. There is no reason to suppose that he did not get the full import of A's question and there is again no reason to

believe that he violated the Cooperative Principle. If he did, he would not answer the question at all. This is the situation that gives rise to implicature. In order to derive the full meaning of B's response, we must interpret the implicature: what B really wants to say is that the novel is not at all good.

Although the imaginative use of implicatures can increase the effectiveness of a piece of composition, we will not be concerned with implicatures in the present discussion. We will make use of the Cooperative Principle and the maxims of Quantity, Quality and Relation alone.

It may be noted that there is no conceptual problem in extending the theoretical concepts originally proposed for conversational interaction to written composition. Written composition can be conceived of as a special form of interaction (of "conversation") between the writer and his audience who are not direct participants in the interaction but whose existence all the same must be assumed. The goals of written and spoken forms of discourse are the same, and the Gricean maxims, Cooperative Principle, and theory of implicatures apply to both. For instance, it is not expected of the participants in a conversation alone that what they say must be relevant and, further, it is not expected that a piece of written composition contain ideas, thoughts and illustrations which have no relevance to one another and to the point of view of the piece. In both, violations of maxims occur, thereby generating implicatures which are assigned interpretation in the same way. All this is not to say that there is absolutely no difference between the two forms of discourse; only that there are a great deal of structural similarities between the two and that a theory originally proposed to study one can be used to study the other.

Extending Gricean ideas to written composition, we suggest that as far as the content is concerned, a piece of composition must satisfy the following requirements minimally. (a) it must have a well-defined point of view, (b) the

ideas, arguments, illustrations, pieces of information, etc. contained in it must be directly related to the point of view and be constrained by the desired length of the piece, and (c) the information used must be correct and the arguments must be supported by facts.

Coming now to how composition can be taught at the given level, we are of the opinion that teaching of the same must constitute (a) discussion of some model pieces of composition in order to help the students see for themselves how these meet the requirements mentioned above, and (b) giving them practice in writing paragraphs and connected paragraphs, preferably of specified length.

Teachers must be careful in choosing the model pieces for discussion. The most important consideration is that the pieces should be interesting. These need not be long, in fact, some of these may be of the length of just one paragraph. These should not be of the same type; if the teacher chooses to discuss three pieces, then one could be argumentative, one descriptive and the remaining one, narrative. Similarly, the themes should be different too so that the students are exposed to a fairly wide variety of compositions.

In order to indicate which points about a piece of composition the teacher may draw his students' attention to during discussion, we discuss below a news item entitled "Asian hockey at rock bottom" that appeared in the sports page of *The Times of India* on 17 October 1986. It is a fairly short, descriptive piece containing a little less than four hundred words and describing the 1986 World Cup hockey match between Pakistan and Canada which the former lost. The match was being played to decide which of the two teams would play India for the eleventh and the twelfth place in a twelve-nation competition. We analyse the passage here to show how it satisfies the requirements of a well-organized piece of composition spelt out earlier.

Given below is the passage:

ASIAN HOCKEY AT ROCK BOTTOM

What they say here is "India and Pakistan are playing the World Cup final". Then the smirk and the rider "From

the other way down". Canada put the thrice world champions Pakistan virtually into the dumps.

So it is India vs Pakistan to see who has the dubious distinction of finishing last in this harrowing Willesden affair. Asian prestige has really taken a big tumble. As India produced earlier so did Pakistan offer the same watered down hockey. No fire, more listless stuff to become victims of lowly Canada who never got a win in the group contest earlier. A 2-1 win for the North Americans filled Pakistan's cup of misery to the brim. What spills over now is anybody's guess.

"Am I really seeing right", they asked at half time when the scoreline read Canada two, Pakistan nil. "It is unbelievable, unbelievable Pakistan fighting for the wooden spoon", they added. But so it went. Canada's consistent marksman Ross Rutledge did the trick twice in two minutes. His goals in the 17th and soon after gave Canadians the leeway to stave off the Pakistani fight-back.

One must say, though, that Pakistan were distinctly unlucky not to be awarded a goal from a 46th minute long corner when Hassan Sardar deflected a Kaleemullah shot into the goal. But umpire Gerrit Hagels from Holland signalled for a corner. He did not notice who had deflected the ball into the goal. Tragic it was because Pakistan were on the verge of a rally at that stage. Nasir Ali had cracked in a penalty corner three minutes earlier. Ross Rutledge pounced on a lapse by goalkeeper Mansoor Ahmed to pounce on the ball and despatch it home. He made a strong deflection to a corner in the 19th minute for his second goal. Canada two goals up was certainly a big shock for Pakistan's hopes to shy away from the battle of the roses. They could not produce any kind of proper rhythm until they came up with all they had in the second half. But against obstruction and first time clearances which the Canadians adopted there was little room for a breakthrough.

Up to the end the Pakistanis fought. Hassan Sardar had a clear look at the goal following a penalty corner in the 59th minute. But he made the mistake of chopping the ball inside the face of a defender. And in the last minute, Nasir Ali hit the last penalty corner of the match inches from the post.

The write-up not only describes the match but also points out how it was viewed by many including the author himself. For the Asians and the non-Asians both, the feeling was one of disbelief; however, for the Asians the experience was one of shock and distress whereas for the non-Asians the match was an occasion to sneer at Asian hockey. It is the downfall of Asian hockey and the attitudes that it generated provide the over-all perspective with which a particular hockey match is described and it is this perspective that provides the point of view to the write-up.

Consider the title of the piece: "Asian hockey at rock bottom". It is as though it is not a particular match that is being described for the benefit of the readers, but something much larger and much more significant of which the particular match is only an instantiation. The topic paragraphs—the first and the second—containing a little more than a hundred and fifty words build up the perspective. When more than one-third of the total number of words used in the write-up are devoted to the building up of the perspective, it is clear that it is not the particular incident that is of vital concern to the author. He wants the readers to treat this event as important only to the extent it throws light on a certain situation that causes anguish to the lovers of hockey in Asia.

The match has been described, clearly from the Asian point of view; Pakistan's defeat by lowly placed Canada is a matter of distress for the Asians, but not for non-Asians and certainly not for the Canadians for whom it is an event to be celebrated. Consider the following lines which describe the general reaction at a certain stage during the match:

"Am I really seeing right", they asked at half time when the scoreline read Canada two, Pakistan nil. "It is unbelievable, unbelievable—Pakistan fighting for the wooden spoon", they added. But so it went.

To make Pakistan fight for the "wooden spoon" and finally to put "the thrice world champions ... virtually into the dumps" was indeed a great achievement for Canada, but since the match has not been described from the Canadian point of view, the tone of the passage is one of pain and anguish and its atmosphere is one of gloom. Thus the title and the topic paragraphs not only define the point of view but also set the tone of the write-up.

Given this point of view, which details can be included in the description of the match itself? Such a description may contain at least the following: the goals and the manner in which they were scored, the opportunities missed, at least the main ones, the pattern of the play in broad

outlines, and the excellence shown by some individual players. The present write-up contains all these: it describes the two field goals by Canada's Rutledge and the penalty corner goal by Pakistan's Nasir Ali, the opportunities missed by both Hassan Sardar and Nasir Ali, and how Pakistan was unlucky in not having been awarded a goal because of an umpiring lapse. Notice that since the match has been described from the Asian point of view, the umpiring lapse has been described in considerable detail:

One must say, though, that Pakistan were distinctly unlucky not to be awarded a goal from a 46th minute long corner when Hassan Sardar deflected a Kaleemullah shot into the goal. But umpire Gerrit Hagels from Holland signalled for a corner. He did not notice who had deflected the ball into the goal. Tragic it was because Pakistan were on the verge of a rally at that stage

In addition to the goals scored, the chances missed, etc., there is a description of the over-all pattern of the match. This is built up by the following: "... did Pakistan offer ... watered down hockey. No fire, more listless stuff ...", "They could not produce any kind of proper rhythm ...", "... against destruction and first time clearances which the Canadians adopted there was little room for a breakthrough", "Up to the end the Pakistanis fought", etc. With regard to brilliant hockey by individuals, there is not much in the write-up. Apparently no one played an excellent game although Canada's Rutledge and Pakistan's Hassan Sardar played a shade better than the rest.

This brief discussion shows that the given piece satisfies the requirements mentioned earlier which well-written pieces of composition must meet as far as their contents are concerned. There is a point of view, the facts provided relate organically to it, and, of course, the information given is authentic. Therefore this write-up can be used as a model for discussion in the classroom.

In the above, we have avoided making observations regarding the language of the passage. Since it is the content of a piece of composition that is our exclusive concern in this paper, we have not dealt with the language aspect of the

piece. This, however, is worth mentioning because we do not wish to assert that the passage is unimpeachable as far as its language is concerned. Some of the lapses it has are as follows: (a) ungrammatical expressions: the word "minutes" is missing after "17th", "give the leeway," "stave of", transitive use of "pounce", etc., (b) use of expressions no longer in modern usage: "thrice", (c) use of clichés: "fill the cup to the brim", "watered down ...", "... room for a breakthrough", etc., and (d) mixing the formal with the colloquial: along with the formal "despatch" ("despatch it home") one finds the colloquial "stuff" ("listless stuff"), etc. In our opinion these do not render the passage unusable in the classroom. Content-wise, it is a well-written passage and its subject-matter is interesting, so what the teacher should do is edit the passage before using it in the classroom.

Turning now to the question of how to give the students practice in the writing of paragraphs and connected paragraphs, we suggest that they should be trained to develop a point of view with regard to a specific issue, event, etc. and to choose from a bulk of material which facts, which examples, which bits of information, etc. must be included in the piece of composition they are preparing. If the content must include arguments, then which arguments should receive priority over which others also needs to be determined, and each of these, whether major or minor, has to be built up with the help of suitable observations, facts, and the like.

But then this choice presupposes that the students have, in the first place, plenty of material to choose from. Experience, however, shows that this is not really so. One way of dealing with this problem is that the teacher must help the learner in acquiring a bulk of information: of facts, of examples, and a range of ideas on the subject on which they are to write their composition rather than leaving this task entirely to the students as is generally done today. Giving the students a reading list on the subject may be necessary, but in today's context, may not prove to be sufficient

We suggest that the teacher use the following strategy in the classroom. To begin with, he must choose a topic on which his students can be expected to know quite a bit and about which they would enjoy writing something. Many problems of the contemporary society, especially those that directly relate to students would belong to this category and so would also be those topics which relate directly to their experience. The choice of such a topic would ensure authenticity of the contents to a considerable extent. Once the topic is decided, the teacher can ask the students to read a few select pieces on it carefully. These could even be newspaper write-ups, reports, articles in magazines, etc. which are easily accessible to the learner.

Then in the class he must initiate discussion on the topic, invite the students to come up with ideas, facts, examples, etc. and he can himself contribute to this pool of material. This way all the students in the class will have plenty of material to choose from. Then the teacher can spell out some viable points of view with regard to the

topic and invite the class to work with him in deciding which arguments, which facts, etc. are more directly related to a particular point of view. The next stage involves identifying sub-topics, assigning facts, illustrations, and the like to each sub-topic and assigning weightage to the various sub-topics so that the students know which of these must be given prominence and which not. Then the students must be asked to write the composition.

To conclude, in this paper we have been concerned with a serious problem in paragraph (and connected paragraph) writing which our students have at the higher stages of school and even thereafter, namely the poor quality of content. We have noted that although the teachers are aware of the problem, they generally do very little to overcome it. It is in this context that the present paper offers some hints to the language teacher as to what steps he can take to deal with this problem. It has been shown that these hints have support from a very influential and fairly recent theory of conversation.

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Major Study Habits Among Secondary School Students in Cross River/Akwa Ibom States of Nigeria

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THREE major stages can always be distinguished in cognitive learning. These are, the acquisition stage, the retention stage and the retrieval stage when the material studied and stored should be reproduced at the appropriate time. Logical connection exists between the three stages almost invariably. For example, a school subject will be very difficult to retrieve or poorly reproduced if it should be poorly learnt and poorly stored.

Many students, it is recognized, do badly academically on factors other than low general intellectual capacity. One such factor is defective study habits which often result in poor academic performance even among the naturally bright students. The researchers were moved by this phenomenon to attempt to find out the following, among other learning disabilities:

- (i) Why some students perform poorly academically;
- (ii) Why some students continue to use certain defective learning habits even though such habits appear to them dysfunctional;

(iii) Severely defective study habits among students;

(iv) Ascertain whether this survey will be consistent with similar ones earlier carried out by other researchers.

Quite too often, useful suggestions from several surveys and researchers have remained unexamined by those bodies and individuals who should utilize them. Needless to mention that this survey is meant primarily for teachers, students, policy-makers, educators, educational administrators in the ministries of education and State School Boards.

Review of Related Literature

The term 'habit' has been variously defined. Psychologically, it refers to a product of learning rather than a reflex and instinct which connote unlearned behavioural tendencies. Although the distinction between many kinds of behaviour, whether instinctive or extremely habitual, is not clear, yet the concept 'habits' is used to refer to behaviour that is frequently repeated and may seem involuntary. Jones (1952) defines habit as a

customary pattern of behaviour either cognitive or emotional response predictable according to the conditions that operate at the time of learning or the underlying acquired set or tendency of that pattern of responses. In this respect, habit is often associated with learning, it is also a concept and not a thing; like concept magnetism in physics and is known through its manifestations and not directly.

William James (1890) once referred to habit as the great flywheel of society, stressing that habitual ways of behaving provide dependability and stability in the society. For instance, verbal and motor habits are familiar to everyone, our emotional and motivational lives are also largely the product of habit. What appeals to us and what we fear, how we dress, our prejudices and appetites which are all learned, are habitual. However habit formation is a gradual process. According to James (1890), the gradual nature of learning is then accounted for by the fact that elementary habits are not acquired at the same rate and that acquisition takes a considerable length of time. For example, learning to type involves first the acquisition of letter habit, then word habit, with word habit later entering into the formation of phrase habit.

The distinction between habit and performances is crucial to the discussion of habit breaking. On other part, Kimble and Gamezy (1968) maintain that although performance based on habit may disappear under various circumstances due to forgetfulness, or deliberate habit breaking, the issue of the complex destruction of the underlying habit itself is still unresolved. They draw a case of regression in which a person under stress reverts to an earlier mode of behaviour explaining that old habits remain even after they have been replaced by new ones. Under normal circumstances, new habits are stronger but stress may cause a regression to the earlier habit. However, it largely remains an individual issue as to whether habit-breaking procedures destroy old habits or merely suppress them.

As noted earlier, habit is a product of learning but a number of educators and researchers have been expressing different ideas on learners' study habits. Pietrasinski (1961) refers to study habits and study skills as two different things adding that study skill is first formed and is then transformed by practice into habit.

Defining study skills as acquired preparation in studying, study habits refer to the studying of something which requires accurate repetition of acquired study skills susceptible to autonomization and standardization which are permanent study elements.

Tussing (1962) argues that students with high intellectual capacity may not realize their goals because they may not have learned the correct way of assembling materials and utilizing their time effectively. Study period, he emphasized, should be regarded as a training for the activities taking place later in life. And the chances are that people with good study habits and well-developed skills in tackling study problems are more likely to succeed with their effective utilization.

Several students seem to prefer studying in a quiet environment. Pauk (1974) found in an informal survey that 43; or 28 out of 65 students considered being alone in a quiet room to study as their most important aid to learning. But he says there is also evidence to suggest that students in sound proof rooms find it difficult to study. Pauk appears to support independent learning. He argues that though we may hear or read the greatest words of wisdom they will remain mere words unless we internalize them as individuals. We may be able to name the courses that we have taken over the years. But unless we internalize the subject matter we have studied ourselves, we will not become independent learners.

Pauk (1974) also emphasizes that a day or two just before the final examination is far more valuable than any equivalent time during the regular term. To do well in the examination one must use this time for organizing and consolidating facts

and ideas gained throughout the course. He also encourages cramming by students who do not know the material. But Pauk sees the cramming habit as an unfortunate necessity which must be done according to a system if it is to do any good. He however cautions that if a student's only chance to pass a course depends on cramming, then he must apply "selectivity". That is skimming and searching the main ideas and pertinent supporting materials and memorizing them could serve a useful purpose in the examination. Pauk also advises students to avoid noisy places and that music is noise which should not be combined with reading. Supporting this view, Henderson (1964) discovers that a student who prefers to study with soft background music gets less out of his reading than a student who reads without it.

Fromm (1941) appears to belong to the group study habit theorists when he stated that human history is a story of the struggling people to be individual and relate meaningfully to others. Dicken et al. (1949) wanted to find out whether individuals after group discussion, were better able to estimate the number of beads in a bottle. The result showed that the majority influenced the individual judgement and right answer. Accordingly, Flynn et al. (1972) feel that group discussion develops the individual adding through discussion, material learned becomes more meaningful to the learner since he must constantly rephrase the information in his own words.

In contrast, Harnack et al. (1977) maintain that group discussion wastes time. The more people there are in the group to explore issues and make discussions the more time they have wasted.

Pietrasinski (1961) claims that the possession of rational study techniques could be the most profitable when regarded as an additional means of cultivating creative attitude to efficient action rather than just a set of instruction. But Robinson (1961) suggests that a plan of study should include class and recreation, time of

study, sleeping, with class hour and outside work stipulated.

Contributing further, Tussing (1962) argues that a student who has acquired good study habits, possesses a behaviour pattern which enables him to work on his assignment with good concentration and without much ado.

Entwistle (1971) sums up his impressions about the various schools of thought when he says that the common premise that all students will follow the same processes to success appears utopian.

Procedure

Study Habits Inventory (SHI) questionnaire was administered on 200 post-primary students in Cross River and Akwa Ibom States of Nigeria.

To achieve as much representativeness as possible within the available time and financial constraints, stratified random sampling was used to select the sample of two hundred students. Stratification was based on the 17 Local Government Areas in the two States as well as the number of schools in each Local Government Area. Though the sample appears rather small vis-a-vis student population in the States, this probable deficiency should be reasonably offset by the sample's diversity in terms of rural-urban schools, cultural practice differences and quality of schools.

The questionnaire consists of 45 items to which the subject is required to respond on a five-point scale indicating the frequency he behaves in that way. These items are grouped under the following sections:

- | | |
|-----------|--------------------------|
| Section A | Homework and Assignments |
| Section B | Time Allocation |
| Section C | Reading and Note-taking |
| Section D | Study Period Procedures |
| Section E | Concentration |
| Section F | Written Work |
| Section G | Examinations |
| Section H | Teacher Consultation |

There was no fixed time for completing the questionnaire and all students were allowed to

[illegible]

On the other hand, those who scored stanine 3 are considered to be really defective in their study habits. These include 24 students or 12 per cent in written work, 33 students or 16.5 per cent in study period procedures, 23 students or 11.5 per cent in concentration; others are 26 students

severely general study habits include 126 responses or 7.9 per cent (on stanine 2) and 90 responses or 5.6 per cent (on stanine 1)

The distribution of students study habits responses on stanines 7 to 9 is represented in the following table.

TABLE 3 Distribution of Study Habits Inventory Responses Showing Proportion of Students Who Scored Stanines 7 to 9 by Method of Stanine Norms									
Stanine	A	B	C	D	E	F	G	H	Total
9	3	3	9	5	10	13	10	47	100
8	13	2	26	12	27	6	27	14	127
7	23	16	12	16	11	27	30	17	152
Total	39	21	47	33	48	46	67	78	379*
As % of 200 Students	19.5%	10.5%	23.5%	16.5%	24%	23%	33.5%	39%	23.7%

or 13 per cent in Homework and Assignments, 22 students or 11 per cent in Time Allocation and 20 students or 10 per cent in Reading and Note-taking. The Tables that follow appear to throw more light on the extent of effectiveness or defectiveness in the students study habits.

However, the following distribution on the eight sections from A to H of the different study habits as assessed on 1 to 9 stanines emerged. Responses which scored stanine 9 on all the different study habits aggregate 100 out of 1600 total responses or 6.3 per cent. One hundred and twenty-seven responses or 7.9 per cent scored stanine 8 with 152 responses or 9.5 per cent scoring stanine 7. This means that a combined total of 379 responses or 23.7 per cent scored stanines 7 to 9 indicating very desirable or effective study habits generally. Two hundred and forty responses and 344 responses or 15 per cent and 21.5 per cent scored 6 and 5 stanine, respectively. These portray moderately desirable or effective study habits.

Two hundred and forty-seven responses or 14.4 per cent represent weak study habits (a score of stanine 4) while 174 responses or 10.9 per cent represent real general defective study habits (stanine 3). Those responses that indicate

As already emphasized, the distribution in Table 3 portrays very desirable or effective study habits by the proportion of students who scored stanines 7 to 9.

The distribution in Table 3 indicates that 19.5 per cent or 39 students use very desirable study habits regarding homework and assignments, 10.5 per cent or 21 students on time allocation; 23.5 per cent or 47 students on reading and note-taking. Others (16.5 per cent or 33 students) are very effective in study period procedures, (24 per cent or 48 students) in concentration; (23 per cent or 46 students) in written work. The rest are as follows: 33.5 per cent or 67 students are very effective in examination with 39 or 78 students very functional in teacher consultation.

But as pointed out elsewhere in this study, 47 students on stanine 9 under teacher consultation appear rather high and the researchers may have to examine the question under Section H, that is, Teacher Consultation to ascertain its real implication.

It is discovered that Section H, Teacher Consultation, contains only two questions whereas other sections contain six on the average with some sections having as high as nine questions. Moreover, the two items appear quite leading.

TABLE 4
Distribution of Study Habits Inventory Responses Showing Per Cent of Students
Who Scored the Bottom Three Stanines by Method of Stanine Norms

Stanine	A	B	C	D	E	F	G	H	Total
3	26	22	20	33	23	24	13	13	174
2	15	18	19	19	22	19	7	7	126
1	13	14	17	4	12	19	7	4	90
Total	54	54	56	56	57	62	27	24	390*

TABLE 5
Distribution of Study Habits Inventory Responses Showing Per Cent of Students
Who Scored the Lowest Stanines 1 and 2 by Method of Stanine Norms

Stanine	A	B	C	D	E	F	G	H	Total
2	15	18	19	19	22	19	7	7	126
1	13	14	17	4	12	19	7	4	90
Total	28	32	36	23	34	38	14	11	216*
As % of 200 Students	14%	16%	18%	11.5%	17%	19%	7%	5.5%	13.5%

* More than the number of students because of multiple responses

- For this reason students who completely understood the two items scored invariably a maximum of ten points yielding an equivalent stanine of 9. Contrary to expectation, the researchers were rather surprised at the figure of 47 students. The number could have been far higher if in the opinion of the researchers most students had understood the operational word 'hesitate' in the second question. Some conclusion and suggestion could be preferred later in the write-up, on this issue.

It was realized that students who receive low grades or who are not performing as well as they should, relative to their mental ability, may well be suffering from defective study habits. The table which follows describes the distribution of the different study habits of a proportion of students who appear to fall into this category.

This distribution in Table 4 above shows that between 27 and 31 per cent of the students are defective in six different study habits. These are: Homework and Assignment, Time Allocation, Reading and Note-taking, Study Period Procedures, Concentration and Written Work. In absolute terms, between 54 and 62 students of 200 students sampled are defective in the study hab-

its just listed above. However, only between 12 per cent and 14 per cent or between 24 students and 27 students are defective in far more serious cases of defective study habits as supported by the distribution in Table 5.

From Table 5 it is clear that between 14 per cent and 19 per cent (between 28 and 38) of the students are severely defective in the six different study habits already mentioned. These include Homework and Assignments, Time Allocation, Reading and Note-taking, Study Period Procedures, Concentration and Written Work.

From the table, it looks as if the techniques of writing examinations and teacher consultation do not pose much problem, for only 7 per cent and 5.5 per cent or 14 and 11 students are severely defective in the two study habits.

While about 31 per cent of the sample are regarded as defective in the various study habits, a good proportion of them between 10 per cent and 24 per cent, as earlier argued, are highly skilled in the different study habits from A to F (see Table 2). As high as 33.5 per cent or 39 per cent or 67 and 78 students, respectively, of the research sample of 200 students appear proficient in examinations and teacher consultation.

students and teachers as well, because improvement in such undesirable habits could only materialize mainly through the efforts of the students. Out of the 200 students, 60 per cent or 120 complained that they always pronounce words to themselves as they read or study the materials. Fifty-eight per cent or 116 students said they have to re-read material several times because the words do not seem to have much meaning after only a few attempts. Fifty-three per cent or 106 students found that having many other things to do make them lag behind their school work. Uneven distribution of time on the various subjects was the acute problem of 46 per cent or 92 students. Forty-two per cent or 84 students say that they always discover that their marks in tests are brought low by careless mistakes, while 40 per cent or 80 students indicate that they found themselves either too tired, bored or sleepy to study well, the moment they settle down to study.

Other equally serious defective habits though reported by a lesser number of respondents include the following: 37 per cent or 74 students complain that after reading several pages of an assignment, they find themselves unable to remember what was just read; 36 per cent or 72 students have trouble picking out the important points in the materials read or studied. Thirty-eight per cent or 76 students prefer the undesirable habit of studying their lesson alone rather than with others; still 36 per cent or 72 students seem to get very little done for the amount of time they spend studying.

Thirty-two per cent or 64 students reported that when any assigned homework is too long or unusually hard, they either abandon or study only the easier part of the lesson; 30 per cent or 60 students normally put off doing written assignment and until the last minute; 34 per cent or 68 students find it hard to keep their mind on what they are studying for any good length of time; 34 per cent or 68 students have trouble saying what they actually want to say on tests; essays and other written work; 31 per cent or 62

students are almost always careless about spelling, punctuation and grammar when answering test questions. Twenty-nine per cent or 58 students cannot finish tests within the time allowed though they work until the very last minute. The remaining 20 per cent or 40 students say that they never begin their assignments as soon as the teacher gives them, thus allowing more to pile up, while 15 per cent or 30 students reported that at the beginning of a study period, they never plan their work in order to make the best use of their time.

We began the analysis of the major study habits among the students by first determining what proportion of students practise the various study habits, like very desirable, moderately desirable and undesirable study habits. Then attempt was later made to estimate what proportion of students are effective or defective in study habits. Also discussed were the categories of students who are just effective and the proportion who are defective. These distinct groups have been exemplified by relevant tables. We finally determined which specific practices under the various study habits are particularly problematic to the students.

From the analysis, the following have been established:

- (a) As high as 43.5 per cent of the students practise defective study habits. Only 14.5 per cent could be regarded as very efficient in the study habits.
- (b) A large majority of the students are more defective in certain study habits than in others.
- (c) That a majority of the students are most defective in the 'core' study habits, like Time Allocation, Reading and Note-taking, Study Period Procedures and Concentration.
- (d) A high percentage of the students appear habitually defective in several study practices under the core study habits.

- (e) Several responses to the items under Teacher Consultation appear rather inconsistent.

Conclusion and Recommendations

Four major problems were postulated as the main focus of the study. Among other things the researchers wanted to find out why some students perform poorly academically. It was discovered from the data that the majority of students are most defective in what appear to be the core study habits. The possibility therefore exists that some students do badly academically not mainly because they are dull. Rather, the reason for poor performance could be found in their inability to practise the correct study habits even though they could be naturally bright.

On why some students continue to practise defective habits knowing well that these practices are dysfunctional, our evidence suggests that some students are habitually defective in certain study habits. In such cases, self-effort is not strong enough to improve upon them. As commented in the SHI Manual, "It is now realized that students will not *automatically* learn effective study skills on their own" (Bakare: 1977). In certain cases self-effort may not be strong enough to improve on their study habits. One of the findings indicates that a majority of students are most defective in what appear to be the core study habits of Time Allocation, Reading and Note-taking, Study Period Procedures and Concentration. Perhaps, this should be consistent with the objective of identifying the severely defective study habits. Some of our findings correspond with some postulations in the manual like:

1. That even bright children can perform poorly academically as a result of defective study habits.
2. That both dull and bright students will not automatically learn effective study skills on their own.

The researchers believe that since both good and poor students need help to improve their

study habits, it is important that programmes for the improvement of study skills be developed by teachers, school counsellors and psychologists. Such programmes should weigh heavily in favour of what this paper has designated as 'Core Study Habits' without which effective learning may not take place.

According to Bakare (1977), the SHI is not intended for use as a selection tool in either education or industry, since the frankness of the subject's responses cannot be guaranteed in such situations. As with other self-reporting techniques, the SHI will not yield valid results if the individual does not provide truthful responses. There is also an indication that the predictive validity of the results will not be high, if the subjects tested are below 17 years of age, since studies by Strong (1943) suggest that interests are not stable until this age is attained. It is not surprising therefore to find in this survey some irreconcilable responses from some students. The author of SHI should take a second look at the language difficulty level of the 45 items.

In evaluating the findings of research studies which have made use of personality inventories, several factors relating to the validity of the results must be kept in mind. Many of the most recently constructed inventories including the Study Habits Inventory (SHI) have been found to be extremely reliable. But they are usually constructed on the basis of a particular theory of the organization of personality. And it must also be remembered that there are a number of theories of personality organization, none of which appears to include all the known facts nor generally acceptable. The value of the results depends also upon the individual's willingness to cooperate and to produce truthful answers, and upon his awareness of his motives some of which may be unconscious. In an attempt to overcome the faking of replies, some inventories include a lie scale or a control key, but there is some doubt as to whether faking or untruthfulness can be entirely overcome by this means. Ultimately, as in all techniques, which pose

problems, the interpretation of the questions by characteristics of the subjects and the wording of the subject is bound to vary according to the the questions.

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Language Policy and the Learning of English

LOUIS VERNAL

LANGUAGE learning is not as simple as it appears to be because it has educational, political, social and cultural implications. In fact, it is one factor that can contribute towards national integration or disintegration. The framers of the constitution visualized Hindi as the official language and hoped it would bind India together and achieve a unity in diversity. Unfortunately this vision has not been materialized. States have been divided on linguistic basis and language riots have been sporadic. There is even a fear psychosis that one language will dominate the others.

Socio-historic Perspective

Historically speaking, English emerged as the main language in India before Independence, being the language of those who were at the helm of affairs. In fact, it was all in all, official and unofficial. Honestly, there was no viable alternative to English considering the multilingual set-up prevalent in India during the last two and a half centuries. The scene changed slightly in the nineteen thirties when gradually the regional languages came of age and made their claim. But this did not change the prestigious position English enjoyed in the then socio-political life of India. After independence a hue and cry was raised against the continuance of English, it having been the language of the rulers who had

been driven out of the country. This spate of emotion has died out, to some extent, as the rationality in man distinguished the essential quality and value of the language from its incidental association with the rulers.

Gandhiji did not conceive English as the national language nor as the medium of instruction but he said: "English is a world language; I do not want to forget that language nor do I want other Indians to give up or forget". The University Commission asserts: "English is the only means of preventing our isolation from the world and we will act unwisely if we allow ourselves to be enveloped in the folds of a dark curtain of ignorance". These opinions are as valid today as they were forty or fifty years ago.

English is still the distinguishing mark of the ruling class and the intelligentsia in India. This class, though constituting a small per cent of the population, exerts its influence over the teeming millions, thinking for them, deciding for them. It still remains the most potent speech. It is the medium of learning, of debates, justice and administration. Though English is a language understood by a minority, it has pervaded all spheres of life in the country.

The most important language for each one of us is our own respective mother tongues. Proudly enough, a number of Indian languages were fairly well developed before the emergence

of English on the world scene. Some of them like Sanskrit, Pali and Tamil had major works to their credit before the fourteenth century at which time English was spoken only by a few thousands of people in a small island and had little literature to boast of. In fact, Chaucer was just about the horizon and Shakespeare was to appear only two centuries later. From the sixteenth century onward there has been no stopping of the gigantic strides taken by English which left the other languages way behind.

We know that English is the most important language in the world today. It was French at one time, Latin or Greek at other. English as a language enjoys a pride of place in business, educational, journalistic, scientific and legal circles. It is used by about 750 million people. It is now the medium of expression of the world's greatest scientists and thinkers. It can rightly be called the global lingua franca, being the language of international trade and commerce, of business and administration, of eloquence and diplomacy, of fashion and instruction. English is a major vehicle of debate at the United Nations; it is, unofficially, the first language of international sport. More than 60 per cent of the world's radio programmes and broadcasts are in English and it is also the language of 70 per cent of the world's mail.

Keeping all these in view, English fulfills the objective criteria that have been framed to judge the relative importance of a language. These criteria are:

- (a) The number of native speakers that a language happens to have.
- (b) The extent to which a language is geographically dispersed, that is, in how many continents and countries it is used or a knowledge of it is necessary.
- (c) The 'vehicular load', that is, to what extent it is a medium for science or literature or other highly regarded cultural manifestations.

- (d) The economic and political influence of those who speak it as 'their own' language.

English has helped us in many ways. It awakened India that had been dormant for many centuries and new ideas entered through this language. Indeed, India rediscovered herself through our association with English. At the same time it has been asserted by some that English has become a vested interest, a language with the help of which a few rule over the vast millions. The language has, thus, acquired a political overtone. It is this that has vitiated the learning of the language. However, it must be stated that no matter how great a language English is, it cannot be the language of India. It cannot serve our inner urges, express our unknown psyche. Each language is associated with a culture. India to remain Indian must have a language of its own.

Unfortunately, such a language has been elusive. Can it be Hindi? But Hindi has not, de facto, become the national language. It has not found acceptance in many quarters. Though Hindi, in one form or other, is spoken by many more people than English, it is the latter which has a more pervasive influence among the people who matter in society. It has to be admitted that despite all the measures taken by the Government to promote Hindi, it is English which has greater hold today and many more want to learn English. This can be gauged by the explosion of English newspapers and periodicals and their circulation as also the spurt in the number of English-medium schools and the every growing rush to get admission there. The influence of the ruling class, the educated class the mass medium—all of which cling on to the heritage of English—is more potent than their counterparts in the Indian languages or Hindi for that matter. Then, again, English has much more to offer, including a cultural ethos that the other languages fail to provide.

We have, therefore, a language triangle—English as an international language having deep

roots in India, the mother-tongue as the language to express our hidden psyche and culture and another language to make us feel 'Indian' Can Hindi be the language of India, a language that is accepted, not imposed? Can it be the official language *de facto* and not merely *de jure*?

One is weary of the colonialism and vested interests of English, one can equally be weary of the neo-colonialism and vested interests of Hindi in the hands of some people. It has divided the country not because of the language *per se* but because of political fanaticism. Can it be the unifying force in a multi-ethnic, multi-religious and multi-cultural polity that is India or are we attempting to untie the Gordian knot?

If politics could be divorced from education, we would have done ourselves a great service. It would not at all be surprising that, bereft of the compulsions, more and more people learned Hindi and English. When Hindi has imperceptibly been learned, it would become the national language *de facto*. At the same time we would have a working knowledge of English. Those who want greater proficiency in English could, of course, learn it more thoroughly. Non-Hindi-speaking people must feel that the adoption of Hindi as the national language would not land them into a disadvantageous position. Hence the language policy and language learning have greater attitudinal dimension than a mere academic one.

Divergent Situations in Learning English

It is, therefore, imperative that a good operational language policy be evolved because it would, then, determine the importance of the various languages, the specific purposes and the areas of activity in which each of them may be employed and to what extent. The government is also responsible for determining not only which languages are to be learnt and by whom but also when and how they are to be taught. It must also determine which elements of the language are to be learned and at which level.

As we are interested in English, it would be worthwhile to turn to the prevailing situation of learning English in the schools in India. There are some schools where English is used as the exclusive medium of instruction with Hindi and/or the mother-tongue forming one or more of the subjects taught in the schools; in some other schools, English is the predominant language with certain concessions being given to Hindi and/or the mother-tongue; in yet other schools, English becomes an equal partner with the mother-tongue and the official language, Hindi; again, in some schools English is taught as the second language and finally in some schools English becomes the third language.

It is also of interest to note the stress and importance given to English by the various states and union territories. In a few cases, English is introduced in Class I, in some in Class III; in others in Classes IV, V or VI. In most states and union territories, the learning of English is compulsory till some stage—Class VIII, X, XII or the degree level. These divergent situations make it impossible to have a common language policy. The objectives and the methodology of learning a language will differ with the status and role of that language as well as the time spent on it and the other inputs.

Skills of a Language

What are the skills (listening, speaking, reading and writing) that we want the students to acquire and what level of proficiency? Most of the teachers struggle teaching languages because they are not sure what they have to do. A clear-cut policy decision spelt out in detail will be a boon to language learning and teaching. The order recommended by audio-lingualists for learning a language is listening, speaking, reading and writing. This is the way children learn their native languages. But there is a difference between the child who learns the first language or a foreign language as a first language, and the adolescent (Class VI) who learns the foreign language as a second or third language. A child

learning the mother-tongue has greater exposure and he has the environment and the members of that particular speech community to help him. Such an ideal situation is wanting in the case of adolescents who depend more on books and the pen. The spoken language takes precedence over the written in the first case. This order is, perhaps, reversed in the case of a second or a third language

We have to decide which is the best order of presenting the four skills from a pedagogical point of view too. In the middle of the nineteenth century, C. Marcel¹ proposed the order: reading, listening, speaking, writing; Gouin² at the end of the century suggested speaking accompanied by physical activity to be supported later by writing. Valerian A. Postovsky³ proposed listening and writing with no speaking for the initial period, while James J. Asher⁴ advocated listening with physical action as the only response. The most accepted order now is listening, speaking, reading and writing. The silent way requires the teachers to say as little as possible so that students' speaking is maximum. The Grammar-Translation Method begins with reading and writing. Many textbooks begin with reading and then speaking about what has been read. This is followed by writing about what has been spoken and read.

The order of presenting the skills will depend on the aim of teaching that language. We have to answer a basic question: Why do we teach English? Wilga N. Rivers⁵ has listed seven classes of objectives of teaching a language. They are:

1. To develop the students' intellectual powers through the study of another language
2. To increase the students' personal culture through the study of the great literature and philosophy to which the new language is the key
3. To increase the students' understanding of how language functions and to bring them, through the study of another lan-

guage, to a greater awareness of the functioning of their own language

4. To teach the students to read another language with comprehension so that they may keep abreast of modern writing, research and information
5. To give the students the experience of expressing themselves within another framework, linguistically, kinetically, culturally
6. To bring the students to a greater understanding of people across national frontiers, by giving them a sympathetic insight into the ways of life and ways of thinking of the people who speak the language they are learning
7. Provide the students with the skills that will enable them to communicate orally, and to some degree in writing, in personal or career contexts, with the speakers of another language and with people of other nationalities who also have learned this language

Though there is no agreement as to which class or classes of objectives, the teaching of English in India belongs, it would be safe to point to objective Class No. 4 since the Indian Education Commission (1964) wanted English to be the 'library language'. After all, these are the skills needed if English is to support learning which is primarily done through the mother-tongue. Theoretically, the aural-oral method is well suited at the early stages followed by reading and writing implying that they would read and write what they had listened to and spoken about. But how many learn English from the first year in school? The introduction to graphic representation from the beginning (Class VI), as is prevalent in India, makes the students depend on the written form and they have less familiarity with and fluency in the spoken form. We have to decide what we want and how we will ensure that what we aim at is achieved. It is not easy to reject the viewpoint that the oral aspect of a language is as important as the written but one

has to be pragmatic and determine the priorities in our Indian context. However, since schools reflect the pressures and needs of society which include the geographical situation, national demands, interests and aspirations of the people, each of the objectives should be kept in mind on developing a language programme. The selection of objectives determines the methodology of teaching that language. In the host of the non-English-medium schools, what usually happens is that the learning of English is nothing other than the learning of a content. The main concern of the teacher is to complete the 'course' which is the English Reader. What is emphasized in the class is the learning of the factual details and not the acquisition of the underlying skills. The mother-tongue is used to help the students to understand the content. There is hardly ever any opportunity to use the language learnt in any situation at all except at the time of the examination when what has been learnt is literally vomitted out. This state of affairs is not surprising because even the examination questions seek to elicit evidence, not of the language ability but of the capacity to remember factual details of the lesson like the occurrence of events, who said what to whom where, when and how. Such questions test the language very little.

If this is the prevailing situation, and if we want English to be a library language, would it not be better if we went back to the Grammar-Translation Method and make the best of a bad situation? People have learnt English through the old methods, using Nesfield and Wren and Martin; others have learnt it through the direct methods. These new methods are valid but we have to see if they are relevant in our context or if an effort has been made to make them relevant. If English is to be a library language and we teach it in the schools as such, the Grammar-Translation Method could fit in since it is grammar and translation that are necessary. We require a content-oriented language learning course with emphasis on comprehension exercises. This is, per-

haps, the prevalent situation in the schools today. With minimum effort we could ensure that the system prevalent is made more worthwhile rather than embarking on a scheme of implanting a thoroughly new system, which is good in itself but not necessary. The Grammar-Translation Method puts less demands on the teachers of English and this is important considering the type of teachers of English we have at present, many of whom have been 'forced' to teach English.

When we talk of the Grammar-Translation Method, it is the aspect of grammar that is predominant followed by accurate translation from the target language into the native tongue. The emphasis on formal grammar, albeit based on artificial exercises, enables the learners to tackle the written language encountered in literary works. If English is to be a library language, it is the written form that takes precedence over the spoken. This again gives stress to the *teaching* of the language rather than the slower active *learning* of the language emphasized by functional grammar.

The Grammar-Translation Method emphasizes memorization of complicated rules and the application of these in translation exercises. The reading and translation of texts is considered to be of great importance. It aims at providing the students with a wide literary vocabulary. It aims at training the students to extract the meaning from texts in the new language by translation into the native language. These aims are achieved in the classroom by detailed grammatical explanations in the native language, followed by practice by the students. Texts in the target language are translated into the native language orally and in writing. This method is not too demanding on the teachers and not much imagination is need in planning and teaching the lessons. But the students will have a poor knowledge of the spoken language and are often confused when addressed in the target language.

Is this what we want? Does this procedure satisfy the aspirations of the parents and the

students? The students feel, and quite rightly so, that language learning has something to do with speaking. They expect to learn to speak it. They are bubbling with enthusiasm when they try and succeed in speaking the language. Many of the interesting activities in the classroom relate to listening and speaking. Oral expression seems to be a most natural activity. This is as far as motivation is concerned

From a pedagogical point of view, we draw upon what we have learned orally when engaged in reading and writing. In reading we not only convert the script into sounds but add intonation and emphasis. These elements are not there in print but results from oral practice. We read more fluently when we can recognize phrases we had said aloud earlier. When we start writing it is what we have said that we put in graphic form. Whether we write or read, we are mentally speaking. Speaking increases fluency both in reading and writing.

Again, oral exercises permit more student participation and can extend over longer periods. A teacher can correct and guide on the spot. In writing this would not be possible. The vivid-

ness of oral practice reinforces the visual impression of the textbook. Those who do not have an opportunity to speak are inhibited and withdraw when they have to speak. Even if they were to overcome this inhibition, the words do not flow as they have had no practice.

We come back to where we started—How should English be taught in the schools, the ordinary schools? What is it that we want the students to achieve? What do we mean by 'English as a library language'? Can we accept the role of English to be merely a 'library language'? The answers to these and other such questions are not easy nor forthcoming. They are related to the status and role of English in India expressed in the objectives of teaching this language. There is a diversity of situations in the different states. Do we leave them as they are, accepting multiple standards and aims or can we arrive at some sort of consensus? The policy-makers and educational administrators have a responsibility here which they have to grapple with to arrive at some definite statements, aims and objectives, leading to appropriate teaching methods and selection of appropriate skills.

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Teaching Science: A Composite Method

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THE learning and teaching of physics and other science subjects are becoming extremely difficult with the passage of time as more and more knowledge is being gathered every day at a very rapid rate. With the traditional teaching/learning process it will be extremely difficult to cope with the latest developments, howsoever good a teacher or a student might be. Hence we have suggested a new method called the composite method of teaching science. We define classroom teaching/learning as close teaching/learning and the other method of teaching outside the classroom is called open teaching/learning. These two methods of teaching/learning are combined in the proposed composite method of teaching science, in general, and physics, in particular.

Although close teaching has been generally followed in our universities, colleges and schools, open teaching has got interest only recently. As an attempt in this direction, open university has also been formed. These open methods of teaching are relatively new and a suitable combination of both close and open methods of teaching may give a new dimension to the method of teaching in general. In the composite method that we have suggested, open and close methods of teaching are com-

pulsorily coupled together. This idea is somewhat new since our universities, other than open universities, do not compulsorily include the features of open universities and vice versa. The coupling of both the systems in a meaningful way, as suggested here, will no doubt lead to a better system of education than either of these systems. The open method of teaching/learning will give feedback to the close method of teaching/learning and vice versa and this method will be extremely useful in building each system.

In this short paper, we start with educationalists' view of methods of teaching and also their suggestions on methods of evaluation of a student by the teacher. Next, we introduce close and open methods of teaching in detail and suggest ways of coupling both the systems. Finally, we discuss the various aspects of these methods and give conclusions.

Educationalists' Guide to Teaching

General methods of teaching as suggested by educationalists may be summarized here. These consist of methods like Dalton plan, Project method, Herbert method, Pestalozzi method, etc

Dalton Plan

According to the Dalton Plan,

1. the student should learn from the given materials and sufficient guidance should be given to all students, especially the less meritorious ones.
2. the entire curriculum should be subdivided into month-wise, week-wise and day-wise assignments and the teacher should evaluate as the work done by the students.
3. the students should be given freedom of work and there should be a regular conference or seminar participated by the students in various topics
4. there should be critical discussion on each topic taught.
5. the teacher should keep a graphical record of the progress of each student.
6. no new assignment should not be given unless the previous one is finished.
7. the student should follow a routine and excess freedom should not be given to the students.

Project Method

According to this method,

1. the students should be given problems on each topic to be solved by them.
2. the problem should be such as to help a student in understanding a topic.
3. the student should participate wholeheartedly in the solution of a problem. Although the teacher should guide, it is the student who should plan and execute the completion of the project using his full talent. The problem should be posed and solved by the students. The students will acquire special knowledge and skill in solving the project.

Herbert Method

We should also try to apply the method of teaching proposed by Herbert. According to him, mind works in two stages e.g. concentration

and reflection. It is seen that a child accepts certain steps after he is acquainted with them properly. The child then compares these ideas with older ideas. But the ideas should be coordinated in such a way that they can be used properly. And the formal steps suggested by Herbert in this connection are (i) presentation, (ii) generalization, (iii) application, (iv) preparation and (v) association.

John Dewey's method, on the other hand, suggests that teaching should have the following things, viz (i) data, (ii) activity, (iii) testing, (iv) problem, and (v) hypothesis. The teacher should also remember the words of Pestalozzi according to which education should be given in accordance with the moral, physical and intellectual capacity of the student. Education should be imparted in the simplest possible way. Education should be given in psychological steps. After teaching a certain thing, the teacher should pause for a while. When the student has followed one thing, the teacher should proceed to the next steps. Teaching should not be based on force.

Even if a teacher has followed the above steps, general educational backwardness may still be there due to one or more of the following reasons.

1. Weak health.
2. A particular incident, behaviour or environment may hinder academic progress
3. Prolonged absence from the class.
4. The curriculum may be beyond the capacity of the student and may fail to satisfy his particular want so that he finds it tiresome and uninteresting.
5. The method of teaching may be psychologically defective.
6. Unfavourable environment in schools and colleges
7. Non-availability of desired reading materials.

We assume that all these standard methods should be used appropriately in the teaching of

students of varied intellect. The students will no doubt be benefited by these methods.

Evaluation of a Student by the Teacher

The teacher should do the following:

1. Internal assessment tests should be held at regular intervals and records should be maintained by the teacher without fail.
2. The method of evaluation in internal assessment tests should be different from that followed in external examination. The teacher should judge the knowledge, comprehension, ability to handle instruments, communication skills, appreciation and creativity through internal assessment tests. Some of these traits cannot be measured through external written examination alone and are to be probed by internal assessment tests only.

The tools of continuous internal evaluation for measuring learning outcomes are:

- (a) Quiz
- (b) Written (announced and unannounced) tests
- (c) Classwork/library work/homework
- (d) Laboratory work/field work/project work
- (e) Term paper/dissertation
- (f) Tutorial/group discussion/seminar
- (g) Personality test
- (h) Viva voce.

The total marks meant for internal evaluation may be subdivided into the above heads.

3. At the end of each course, one terminal examination should be held. The terminal examination should have a portion which follows the Graduate Record Examination of the American University. Questions for the internal assessment and terminal examination should be so framed that the multi-dimensional abilities of a student are tested. In the marking system precision should be up to the first decimal place and there should be grade system alongside the marking system.

4. A question bank should be formed. In addition, uniformity should be maintained as regards framing the syllabuses and gradings all over the country.

Close Methods of Teaching

Close methods may be the following:

1. For any lecture in science, mathematical aspects should be stressed first, followed by historical as well as philosophical background.
2. Coloured chalks should be used to make diagrams and board work more attractive and interesting.
3. Simple experimental demonstration involves the following:
 - (a) Photographs showing experimental demonstration
 - (b) Actual demonstration of each experiment in laboratory (wherever possible)
 - (c) Examples from applications to daily life
 - (d) Transparency may be used for giving a review of important topics at higher level of teaching
 - (e) Notes should be supplied to students wherever necessary and rare teaching materials should be supplied to them
 - (f) Students should be encouraged to read as many books, references materials and journals as possible
 - (g) The teacher should use mechanical or optical teaching aids discovered from time to time. For example, he should use a pointer to focus on the points of the blackboard on which he is concentrating. He may take the class around a table on a piece of paper (carbon papers placed underneath pages) when there are four or less number of students (as in a special paper class). The teacher may try to discover other methods which would suit his requirements for better teaching depending upon individual cases

- (h) While trying to learn a new topic, the teacher and students should both work together in collecting material, reading and discussing and in solving new problems. The attitude of collaborative method of learning should be developed right from the under-graduate level.

Open Methods of Teaching

The teaching outside the classroom is called the open method of teaching. This method utilizes teachings from various sources like the following:

- (a) Discussions among teachers and students on different topics.
- (b) Excursions to different places for educational purposes.
- (c) Interactions with scientists and learned people.
- (d) Learning from UGC educational programmes on TV, radio talks, public libraries, seminars and conferences.
- (e) Learning through the use of calculators, computers and from video science films.
- (f) Nature is a big laboratory. One should try to learn as much as possible from nature.
- (g) In order to synthesize the old traditional Indian method of education with the modern method, education should spread from the Guru to the disciple (as in the learning of music).
- (h) Such open methods of teaching should be complementary to the close methods of teaching.
- (i) There should be intellectual discussions among students and a science club should be formed which should organize seminars and exhibitions at regular intervals.
- (j) Regular practice of yoga will help students develop healthy body essential for a healthy mind. Meditation and concentration should also be practised. Creative thinking should be encouraged.

Coupling of Closed and Open Educational Systems of Teaching

It has been stated earlier that these educational systems are complementary to each other. Hence the same person should learn partially through the closed system and partially through the open system. Then only will education be more and more complete. A student can learn from the teacher as well as from fellow students. Even a teacher can learn from good students who have learned new things. In this way, knowledge can spread at a faster rate. Learning may be compared to absorption and teaching to emission in spectroscopy (Fig. 1). Some students may learn from different sources to become better than their teachers. Similarly, senior teachers may learn from junior teachers. In this way we get better and better teachers and students. This has been possible due to the addition of the open method of teaching to the closed method and owing to the coupling of both the systems.

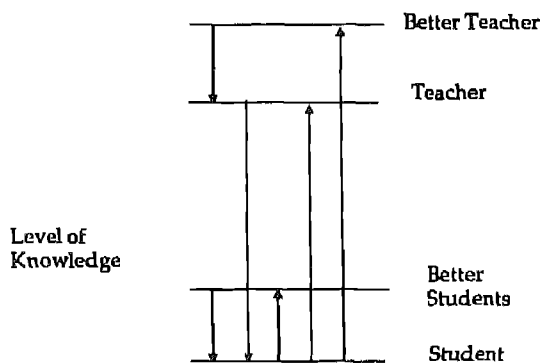


FIG. 1
Learning as Absorption and Teaching as Emission
in Spectroscopy

Discussion

It may be mentioned here that the applicability of the methods of teaching discussed above is broad in nature and will be useful in teaching a wide range of subjects. The question that we posed was: How to spread education in a better

way and at a faster rate to the younger generation? The increasing amount of researches makes it difficult for us to keep pace with the rapidly developing frontiers of knowledge unless faster methods to tackle them develop. Here we have attempted to give some answers to these questions. Additional ways of tackling the problem may be thought of. Mastery over certain topics should be obtained by a joint effort. Finally progress will be faster if the student has a hobby which, in some way or other, helps the profession.

Further, specialization of a student should start right from the higher secondary stage. Also, the number of subjects should be reduced so that

a student is able to concentrate on his field of specialization.

Conclusion

Thus we may have better and better students (and hence better and better teachers) in future if we do not separate the close method and the open method of teaching. We often hear people say that our university education system is defective. This is partly due to the fact that we do not include the open method in the scheme of teaching. If both the methods are considered together in the same curriculum, we will definitely have better students and better teachers.

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Some Cognitive and Affective Consequences of Mastery Learning Strategy: An Experimental Study

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MASTERY Learning Strategy (MLS) is an instructional procedure which has gained currency recently as a deviation from the traditional methods of mass instruction. MLS is an individualized instructional procedure in which a student learns at his own pace; decides when he is ready for the next learning assignment; takes guidance from his peers and instructor; and takes a criterion test to assess his mastery over his on-going assignment.

In MLS the student is allowed to proceed on to the next assignment when his performance is perfect or near perfect on his present assignment. Because of the features of self-pacing, individual guidance and mastery testing, many educators (Carroll, 1963; Bloom, 1971; Keller, 1968; Mayo, 1970; Mathur, 1983) see MLS as a viable alternative to the lecture method of classroom instruction.

The Problem

In order to determine the efficacy of MLS in Indian situation, an experimental study was undertaken. The problem for the experiment was to find out the effect of MLS upon achievement, scientific attitude and understanding of science

of the students of senior secondary classes, in the age-group of 15-17 years.

Hypotheses

The following hypotheses stated in the null form were tested:

1. MLS will not produce any significant gain in students' achievement in physics.
2. MLS will not affect the scientific attitude of students.
3. MLS will not affect students' understanding of science.
4. There will be no favourable reactions of students towards MLS.

Experimental Design

The present study utilized the control-experimental-groups-design to test the above-stated hypotheses. Two groups (N=50) matched on intelligence and previous knowledge in physics worked as the two comparison groups. The experiment was carried out in the Motilal Nehru School of Sports, Rai, Haryana which is a residential school affiliated to the Central Board of Secondary Education and had students from the

middle and high socio-economic strata of society.

The experimental group underwent a six-week MLS treatment while the control group received the traditional instruction. For the experimental group, the criterion for mastery was 80 per cent marks or above in the mastery test for various study units.

After the completion of four units in physics (Mathur, 1983), both the groups were administered post-tests in achievement (a teacher-made test), scientific attitude scale (J.K. Sood scientific attitude scale) and understanding of science scale (Cooley and Klopfer scale).

Statistical Analysis and Results

The statistical data were analysed, using the t-test technique for the two comparison groups and the Mann-Whitney test for the analysis of the scores of the three subgroups, viz. low-achievers, average-achievers and high-achievers on the previous knowledge test.

The results on the basis of the t-test analysis for the two comparison groups are summarized in Table 1.

Also, the reaction of the students of the experimental group were highly positive toward MLS.

Thus all the four hypotheses were rejected and it was concluded that MLS has significantly positive effect on achievement, understanding and attitude.

Furthermore, gains analysis of the three subgroups was done using the U-test technique. It was found that high-achievers did not gain significantly on achievement, scientific attitude and understanding of science. Average-achievers gained significantly on all the three variables at .01 level of significance and low-achievers gained on the three variables at .05 level of significance.

The most striking result of this analysis is that average students benefitted the most on all the three variables.

The findings of the present study are in support of the results of the studies done by Block (1971), Bull (1971), Duncan (1976), Millet (1976), Brent (1982), Reed (1983), Mathur (1983), Hooda (1984), Yadav (1984) and Kishore (1986).

Thus, it can be concluded that MLS produces positive cognitive (achievement and understanding) changes and effective (attitude and reactions) changes. Also, in Indian situation, MLS can work as a viable alternative to the lecture model of instruction.

TABLE 1 Comparison of the Experimental and Control Groups on Achievement, Scientific Attitude and Understanding of Science					
Variable	Group	N	M	S.D.	t-test
1 Achievement	Control	25	30	3.4	5.96**
	Experimental	25	40	4.7	
2. Scientific Attitude	Control	25	319.3	22.2	4.88**
	Experimental	25	353.4	26.6	
3. Understanding of Science	Control	25	24.7	3.7	2.38*
	Experimental	25	27.6	4.3	
* Significant at .05 level ** Significant at .01 level					

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Non-formal Adult Education: Identification of Motivational Strategies and Linkages of Learning Needs

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ILLITERACY is an aspect of under-development. Functional literacy programme which are being carried on in developing countries are undertakings whose doctrine and methodology have their place among attempts to renew the educational system and their relationship with development. Functional literacy programmes aim at general enlightenment, modernization of society and dynamic change. It can be viewed as a mechanism, enabling those who attained adulthood without formal schooling to attain the benefits through non-formal functional literacy programmes. In India, the literacy rate, according to 1981 census, is 36.23 per cent and according to the World Bank, if there is no change in the rate of growth of population and the rate of spread of literacy, 54 per cent of the world's illiterate population in the age-group 15-19 would be in India, by the dawn of the twenty-first century. The removal of illiteracy is not an impossibility as its eradication has been demonstrated by many countries of the world. However, at the same time, it is not an easy task and

its success would depend on infrastructure, personnel and strategies which could go a long way in mobilizing and motivating the poverty-stricken masses to take responsibility for their own welfare rather than passively accepting their fate. Motivation of adults would largely depend on situation specificity, i.e. how well a particular educational activity articulates with the needs of the population group for which it is planned. The present study was undertaken to examine the motivational strategies being used and linking the learning needs of the adults with the non-formal literacy programmes.

Design of the Study

The study adopted a descriptive survey design using interview as the basic technique for surveying the data.

Sample

Sample was drawn from five adult education centres around Chandigarh. From each centre 12

to 15 male adult learners were selected so as to form a population group of 65 learners who were interviewed to ascertain their ego involvement in the programme and identify their learning needs

Results

The investigators experienced certain constraints in the development of functional literacy programmes and these too are illustrated along with the research variables, i.e. motivation and learning needs.

1. Motivation

Motivation of the learners depends on bringing home to them the philosophy and sociology of education, relationship of education to quality of life, learning climate, content, form and instructional methodology. The results of the experimental world literacy programme as well as the experience of the countries where illiteracy eradication programmes have successfully been implemented show that a systematic effort must be made for creating an environment favourable to launching such a massive programme. To eradicate illiteracy, the pre-requisite is indeed motivation for all persons to be involved in the adult education programme. The investigator interviewed 65 learners to find out whether they had clarity of purpose and ego involvement in the learning tasks. The basic purposes of adult learning were not clear to them. They were not clear that programme was designed to improve their lot by increasing their knowledge, skills or sensitiveness or enable them to enlarge and interpret their own experiences. The learners, however, were conscious that educated people had a better standard of living and were more sociable, more aware, more conscious of their rights and duties, more confident, independent and respectable, were better parents and citizens but were not sure whether their learning would develop them on similar patterns. They suggested very strongly that adult education programmes had no content that might support the change.

The next issue was that of learning climate and according to over 50 per cent learners physical environment is not comfortable. Most often classes are held in the open and learners are made to sit on the ground. There are no blackboards, charts or any other audio-visual aids to sustain their interest in the class. Some classes are conducted in the verandas or rooms, where seating and light arrangements are inadequate. Bare floors, bare walls and dim lights certainly do not attract a learner in a cold winter evening, who has come to the centre after having worked all the day at a job. The student instructor has no control over it. The psychological climate is equally depressing. The instructor is not punctual, regular, mature and sensitive to the needs of the learners. Unpunctuality and irregularity on the part of the instructor is found to discourage the learners no end. The learners feel discouraged when they come to the Centre to find the instructor absent. This is a big disrespect to them. As it is, our adult learners are found to suffer from complexes for learning from instructors who at times are half their age. A mature caring and sensitive instructor can draw the learners out of their shell by establishing rapport with them, feed their ego, develop their self-concept and thus generate self-confidence in them. Next, content is not relevant to their everyday needs. It emphasizes literacy alone and literacy unfortunately is their last priority. Apart from it, the language and vocabulary used in the basic literacy primers are not suitable to the local conditions. There is a need to make a comprehensive survey to gather and to get a feel of local vocabulary and dialect of the people. Writers should be from the region where the material is to be used to make it more interesting and relevant to the readers. The teaching methodologies are not interesting. It was inferred from discussion with the learners that traditional pedagogical practice is in force at the adult learning centres where the major role is being played by the teacher. The learner's role tends to be that of a passive recipient of the teacher's instruction rather than

that of participant in the process. The instructor-learner interaction in the classroom setting is lacking and there is little flow of ideas between the two. A remedy to this lies in strengthening the training inputs. The instructors should be given intensive training and made more familiar with the principle assumptions of andragogy, principles of adult learning and disabilities in adult learning. This is likely to help the instructor develop strategies of teaching and create a suitable learning climate at the adult learning centres.

Next, the timings of learning must suit the adults. In certain cases, it does not suit both the instructor and the learners. The instructor, being a college student, is not available round the year. He is available for hardly 6 to 7 months and the momentum that is gathered gets lost when the instructor is absent for 3 to 4 weeks during his examination days. Many learners lose interest in the literacy programmes that are not conducted regularly. The mechanism of involvement of students is rather weak. Engaging of a student-instructor on a paltry payment of Rs 100/- p.m. may not prove effective unless some voluntarism and an inbuilt mechanism of supervision and monitoring is developed. It may be desirable to involve community as this programme is essentially for them. For effective involvement, people's organisations should be formed. In villages, adult literacy clubs can be formed. Following can be the composition of the club:

- Village Sarpanch
- Ex-servicemen
- Retired officials from government or other organizations
- Local school headmaster
- College lecturer incharge of adult education programme
- Supervisor
- Student-Instructor.

The club can guide the instructors, supervise their work and also teach the adults in the absence of student-instructors, particularly the

retired teachers, government officials and ex-servicemen.

Readiness on the part of the learner to learn is the most important issue and the learners would be ready to learn only if programmes are related to the growth and developmental tasks of the adults. The learners should feel with full conviction that the adult education programme in which they are participating is a programme which essentially meets some of their needs that are related to their life and work. These tasks are primarily related to the social roles of the adults. Motivation or readiness to learn would depend on how well these developmental tasks are taken care of in the adult learning centre. The first developmental task is a person's role as a worker. At this point, he is ready to learn any thing that may help him to do a job well or get a job in case unemployed. So, it would be desirable to include vocational training component in adult learning programmes. In addition, discussions on citizenship, democracy, social, economic and religious values may prove extremely useful in motivating the adults to functional literacy programmes.

2. Learning Needs

It has been found that the process of identifying human needs is traditional. These are perceived by others and the instructor defines the needs of the learners rather than giving them an opportunity for discussion. This is in direct conflict with the self-directivity of the learner and the social philosophy of learning. An adult will be motivated to learn that will serve his needs. A diagnostic appraisal of the needs of the learners based on a discussion with the learners is as follows:

Agricultural or vocational needs would include special training, job support and assistance, appreciation of agricultural development and use of relevant technology. It would be naive to expect student-instructors to teach vocational skills. Participation of community

workers for giving resource support to the movement should be ensured.

Next, the vital component is religious and (national) values.

Further in priority are political awareness, political evolution of the nation, democracy, votes for illiterates, communal harmony and environmental education.

The learners need some socio-cultural education. They want to know about their heritage, social customs, traditions and programmes

developed for their welfare, particularly facilities for their growth, development and economic betterment, family welfare, family education, and other allied issues.

It may be concluded that functional literacy programmes can take shape as an educational system wherein the content leads to social, economic and cultural development when instructors and learners mesh with each other in a complementary fashion and wherein instructional strategies lay emphasis on experimental and innovative techniques.

Personality Traits of Sportsman and Non-sportsman Secondary School Adolescents

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TODAY, games and sports have become an important part of human culture throughout the universe. Stone (1962) stressed that "life must be viewed as a continuous socialization for the child and the adult, that life is a series of careers with each critical turning point marked by a definite change, the new upcoming 'game' being rehearsed immediately prior to entry upon the appropriate field of play". Personality traits and sportsman spirit are highly correlated with each other. An eminent educational thinker Froebel said, "Sports or play is the highest phase of child development. Play is the purest, most spiritual activity of man at this stage, and at the same time, typical of human life as a whole of the inner hidden natural life in man and all things". It is full of pleasure, freedom, peace and mental as well as physical activity. According to Stern, "Play is a voluntary self-constrained activity". Sportsman spirit is a natural and universal phenomenon. It is an essential part of the adolescent's personality. It helps the individual to mould his/her personality towards appropriate future life. Educationists have since long been interested in the phenomenon of sports as a

means for personality development. Sports relieves emotional as well as mental tensions. It trains the mind and provides better physique to an individual.

The present study is primarily focussed on the personality traits of sportsman and non-sportsman secondary school adolescents. Personality plays a significant role in determining the individual's life adjustment and it is on the personalities developed in the educational institutions of a nation that national progress depends. Education and sports as important instruments of social change and progress try to develop those desirable characteristics in the personality of students which can facilitate national development. Besides, the personal character of the citizens of a particular nation not only determines the general ethos of its society but it also influences the personality of the individual with regard to the process of development and modernization. It cannot be expected that a society composed of individuals with poorly developed personalities will be able to maintain progressive trends. Thus, the development of appropriate personalities through the sportsman-spirit in

secondary schools is of paramount importance and should be appropriately taken care of.

Objective

The main objective of the study was to find out the differences regarding the personality traits of sportsman and non-sportsman secondary school adolescents.

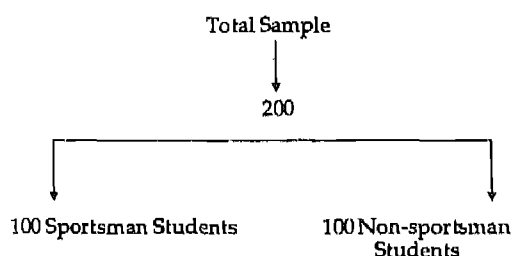
Scope

The study was confined to the secondary education only. Four secondary schools of the Almora town were randomly selected for the study.

Method and Procedure

Sampling Design

A comparative study was undertaken on sportsman and non-sportsman secondary students. Sportsman and non-sportsman students were selected from such randomly selected schools to enable the investigator to study the personality traits of sportsman, non-sportsman students. The sampling design was as under:



Four secondary schools were randomly selected from the Almora town.

Name of the College	Sportsman Students	Non-sportsman Students
1. Ramsay Inter College, Almora	25	25
2. Government Inter College, Almora	25	25
3. Adams Girls Inter College, Almora	25	25
4. Government Girls' Inter College, Almora	25	25
Total	100	100

Tool

To find out the differences in the personality traits of sportsman and non-sportsman students, the sixteen-personality-factor questionnaire (16 P.F. by Cattle) standardized for Indian population by S.D. Kapoor was used.

Technique of Data Collection

Data were collected from four randomly selected schools of Almora town. A total of 100 sportsman students, who participated in the district level sports were selected from these colleges with the help of principals, teachers and clerks. Then the 16 P.F. was administered. Similarly, 100 non-sportsman students were randomly selected and administered the same tool.

The scoring of the tool was done by hand scoring keys. Then the raw scores were converted into the sten scores with the help of the sten table.

Title and Symbol for Designation of the 16 Personality Traits		
Sym- bol	Low Sten Score (1-4)	High Sten Score (7-10)
A	Reserved	vs Outgoing
B	Less intelligent	vs. More intelligent
C	Affected by feelings	vs Emotionally stable
E	Humble	vs. Aggressive
F	Sober	vs Happy-go-lucky
G	Weaker superego strength	vs. Stronger superego strength
H	Shy	vs Venturesome
I	Tough-minded	vs Tender-minded
L	Trusting	vs Suspicious
M	Practical	vs. Imaginative
N	Natural	vs. Shrewd
O	Confident	vs. Worrying
Q1	Conservative	vs Experimenting
Q2	Group-dependent	vs. Self-sufficient
Q3	Careless of Protocol	vs Socially Precise
Q4	Relaxed/Unfrustrated	vs Tense

Results and Discussion

Table 1 shows the mean scores of different personality traits of 100 sportsman and 100 non-sportsman students.

TABLE 1

Personality Traits	Sportsman Students		Non-sportsman Students		t	Level of Significance
	M	SD	M	SD		
A	5.27	1.99	5.05	2.08	0.78	NS
B	5.74	1.87	4.93	2.02	2.86	.01
C	6.56	1.95	5.53	1.96	3.68	.01
E	4.37	2.18	4.98	2.35	1.85	NS
F	5.53	2.45	5.70	1.87	1.19	NS
G	5.67	1.17	4.72	1.93	3.39	.01
H	5.64	2.27	5.04	2.10	2.00	.05
I	5.53	2.11	5.30	2.26	0.77	NS
L	4.96	1.97	5.24	1.99	1.00	NS
M	5.75	2.12	5.68	2.01	0.25	NS
N	5.12	1.84	5.29	2.19	0.61	NS
O	3.98	2.23	5.19	1.98	4.03	.01
Q1	5.62	2.10	5.70	2.08	0.29	NS
Q2	5.27	2.21	5.16	1.99	0.37	NS
Q3	5.78	1.86	5.21	1.90	2.16	.05
Q4	5.49	2.45	6.27	2.02	2.51	.05

Examination of the mean values of the personality traits given in Table 1 reveals that sportsman students were found more intelligent, emotionally stable, stronger superego strength, venturesome, self-assured, socially precise and less frustrated than non-sportsman students. Whereas non-sportsman students were observed less intelligent, emotionally less stable, weaker superego strength, shy, more depressive, indisciplined and more frustrated in comparison with sportsman students. The re-

maining nine personality traits, viz., A, E, F, I, L, M, N, Q1 and Q2 were found more or less similar in nature in both the groups.

This study reveals the significant differences exist between sportsman and non-sportsman groups on their personality traits. Thus, in brief, sportsman-spirit influences the personality of our adolescents towards socially expected direction. So, it is our moral duty to provide more sports facilities in our educational institutions.

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TO OUR CONTRIBUTORS

JIE invites articles/papers on the impact of educational research on classroom practices and policy decisions. Specific examples where this impact is apparent may be given.

GENERAL EDITOR

Psychology in Second Language Teaching

R. P. SHARMA

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IT IS natural for people engaged in developing an inadequately efficient and sufficiently practicable methodology of second language teaching to turn, for help, to such kindred disciplines as linguistics and psychology. Linguistics deals with the nature, behaviour and function of language, as psychology deals with the properties, processes and laws of the human mind. We can, therefore, try to combine the knowledge of linguistics with the knowledge of psychology in order to arrive at a viable theory of language teaching on the basis of expectation that the former will provide the content and the latter the procedure of this programme.

Influence on Second Language Pedagogies

As is so well known, the two major schools of psychology that have influenced second language pedagogies are: (1) the Behaviourist School and (2) the Cognitivist School. The theories of learning advanced by these schools have been responsible for the formulation of a variety of theories and methods of second language teaching.

The rise of behaviourism in the early decades of this century seems to have been prompted by a general realization among psychologists that the premises and constructs, such as states of consciousness, introspection, ideas, images, instincts,

thoughts, attitudes, and so on, which were intended to describe and explain human behaviour, could never be tested and verified. Certain psychologists, therefore, decided to tighten the study of the relationship between man's environment and his behaviour by concentrating on what was clearly observable and explicitly describable. They tried to postulate premises and constructs which could objectively explain human behaviour and establish psychology as a responsible and respectable science. Quite naturally, this movement in psychology turned out to be "a swing back toward objectivism and a concentration on defining and explaining behaviour on the basis of verifiable hypotheses" (Kess 1976:33). J.B. Watson best sums up the tenor of the new age in these words: "The behaviourist asks: Why don't we make what we can *observe* the real field of psychology? Let us limit ourselves to things that can be observed, and formulate laws concerning only those things. Now, what can we observe? Well, we can observe *behaviour*—*What the organism does or says*. And let me make this fundamental point at once, that *saying* is doing—that is, *behaving*. Speaking overtly or to ourselves (thinking) is just as objective a type of behaviour as baseball" (*Behaviourism* 1924:6 p 33).

The behaviourist wanted observables at both

ends of the behavioural process — the stimuli that served as inputs to the organism and the organism's resultant outputs and thus committed himself to admitting as evidence only that which he could observe. As far as language behaviour was concerned, the behaviourist's data were only the utterances that people made and the conditions under which they were made. Stimulus and response and the relationship between them have permeated every brand of behaviourism from Pavlov to the post-Skinnerians to an extent that in course of time behaviourism came to be known as *Stimulus-Response Psychology* or simply S-R Psychology (cf. Rivers 1964:168). The type of intellectual atmosphere and the aims and tools of psychology accepted and fostered by behaviourists, therefore, led to a heavy emphasis on experimental designs and statistical analyses of data. The laboratory became the holy pilgrimage of these revolutionary psychologists. Every theoretical formulation had now to be based on what had been seen and verified in the laboratory.

Classical Conditioning

The systematic development of behaviourism can easily be attributed to the findings of the famous Russian Psychologist, Pavlov, who formulated the theory of *classical conditioning*. Through his well-known experiment with dogs, Pavlov attempted to demonstrate that learning was, in fact, an *associative process* which brought about changes in the behaviour patterns or states of knowledge of the organism by exposing it to new experiences. Some of his basic assumptions were: (a) There is a natural connection between a stimulus (S₁) and a response (R) which can be exploited for conditioning, (b) A bond of association can be formed between S₁ and a new stimulus or S₂, (c) Once the bond of association between S₁ and S₂ is established, S₂ by itself can produce the response which has so far been produced by S₁, (d) The new bond between S₂ and the response, however, owes its existence to the *contiguity* between S₁ and S₂ and to the frequent repetition of the two stimuli.

In strictly Pavlovian terms, learning is entirely a matter of manipulation and the learner is only a passive role player. The experimenter (or teacher) can bring about any amount of change, through his manipulations, in the behaviour patterns of the learner who will mechanically dance to the tune of his master. If we follow Pavlov's theory of learning (also known as 'contiguity theory of learning'), we can definitely presume that the learner has no personality of his own. The learner is so malleable a character that the teacher can shape his personality the way he likes. The teacher can make an angel out of a fool or, may be a fool out of an angel. Within the Pavlovian paradigm, learning is presented as a mere adjunct to teaching. Under this thoroughly teacher-centred programme, the learner learns only what the teacher teaches him.

Learning by Selecting and Connecting

As time drew on, Pavlov's theory of learning was found to be miserably inadequate to the task of describing and explaining complex changes in human behaviour and, that is why, it was soon superseded by other theories in psychology, notably those of American psychologists like Thorndike and Skinner. On the basis of his experiment with cats, Thorndike was able to propound a theory of learning commonly known as *trial-and-error behaviour* which Thorndike himself preferred to call 'learning by selecting and connecting' and hence the label 'connectionism'. Thorndike's theory of learning is best summed up in his three famous 'Laws of Learning': the law of effect, the law of exercise and the law of readiness. This theory of learning postulates that the learner must be sufficiently motivated to learn and that learning must be made a rewarding experience for the learner. Thorndike's emphasis on motivation and reward clearly indicates that in his view the learner, though quite predictable, is not an *entirely* manageable creature. The most important contribution of Thorndike's theory of learning is usually attributed to his Law of Effect which states that if an act is followed by a satisfying state of affairs, the

probability of its recurrence in a similar situation is definitely increased.

Theory of Reinforcement

The founder of programmed instruction and of the best-known version of the theory of Reinforcement, B F Skinner has certainly been the most widely discussed psychologist of the twentieth century. Skinner's theory of reinforcement has been applied most assiduously to the explanation of language learning by human beings. To get a clear view of what he means by learning through reinforcement, it is necessary to recall Skinner's crucial distinction between two types of response the organism is capable of making to available stimuli. The proponents of classical conditioning lay down that no response can occur in the absence of an actual stimulus. But Skinner argues that responses can and do occur even when there is no directly identifiable stimulus and this forms the basis of his distinction between the two types of responses. Behaviour that is caused by a stimulus or is elicited by a causal agent is, for him, only one type of behaviour to be known as *respondent* behaviour. In all forms of respondent behaviour there is a necessary correlation between stimulus and response. There is, however, another and a more important type of behaviour which Skinner calls *operant* behaviour. Operant behaviour is behaviour that occurs even when there is no directly identifiable stimulus or causal agent. For Skinner, much of human behaviour, particularly language behaviour, takes place according to the laws of operant conditioning. To put it differently, the organism, through a process of trial-and-error, does ultimately learn to operate upon (hence the term *operant*) or make use of certain features of the environment. Skinner, however, believes that effective learning takes place only when correct responses are *reinforced* in the form of reward or appreciation. Reinforcement through reward or appreciation always increases the recurrence of correct responses, provided prompt reinforcement takes place between the occurrence of the correct response and any other set of responses which

might intervene. Reinforcement is a mandatory requirement of this theory of learning. If there is no prompt reinforcement, the recurrence of correct responses will gradually decrease and ultimately stop.

As far as the linguistic behaviour of human beings is concerned, Skinner always concentrates on what linguists call 'parole'. Man learns to perform his language behaviour (or *verbal behaviour* as Skinner prefers to call it) in response to a variety of stimuli as a result of the gradual increase in his *operant strength*. Human verbal behaviour is emitted behaviour which is reinforced by a listener, sometimes by the learner himself, and which develops the same way as other forms of operant behaviour do. The two characteristic features of the Skinnerian model of learning are that language learning is not different from other forms of learning and that learning processes are the same in humans as in animals (cf. Rivers 1964:248-177). Nevertheless, it is significant to note here that however pliable and eminently teachable he may be, the human learner is allowed, within the Skinnerian framework, a certain degree of intelligence and freedom which he could not have been expected from the proponents of classical conditioning. All said and done, Skinner's learner is much more intelligent, free, active and human than his predecessor in the Pavlovian world.

Despite these virtues, Skinner's theory of learning and the resultant theory of teaching deserve to be criticized for the following reasons:

1. It fails to account for the fundamental differences between human and non-human cognitive capacities. Animals are not just less human than men; they are simply non-human. Animals and humans are not different in *degree*; they are different in *kind*. It is possible to say that animals possess "intelligence" or that they are capable of "thinking" but we must remember that here we are using the terms "intelligence" and "thinking" in a metaphoric sense and that they must be sharply distinguished from intelligence and thinking as applied to human beings. The cut-off points between humans and animals are so neatly and irrefutably ordained by Nature. The evolutionary gap between human and animal brain structures is simply un-

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1. It fails to account for the fundamental differences between human and non-human cognitive capacities. Animals are not just less human than men; they are simply non-human. Animals and humans are not different in *degree*; they are different in *kind*. It is possible to say that animals possess "intelligence" or that they are capable of "thinking" but we must remember that here we are using the terms "intelligence" and "thinking" in a metaphoric sense and that they must be sharply distinguished from intelligence and thinking as applied to human beings. The cut-off points between humans and animals are so neatly and irrefutably ordained by Nature. The evolutionary gap between human and animal brain structures is simply un-

bridgeable. Whatever a man may be—a prophet or a rogue, a genius or an idiot, an apostle of truth or a congenital liar, a lover of peace or a compulsive quarreller, an angel of decency or a moral wretch, but we have to admit that even in his least human acts or appearances, he is much more sophisticated and self-conscious than the best of brutes. By virtue of intelligence alone, the human individual stands without a peer on earth. Only he has the unique capacity to act and react in his own way. Even the humblest of humans are quite unpredictable. The humanity of humans lies in their innate capacity to refute systematization, classification or levelling out. Contrasting the exquisite structure of the spider's web with the visible imperfections of many a human creation. Isaac Asimov notes in his well-known *Guide to Science*, "Looking at the spider's intricate web built with beautiful precision and effectiveness for the function it will serve, it is almost impossible to believe that the thing has been done without purposeful intelligence. Yet the very fact that the complex task is carried through so perfectly and in exactly the same way everytime is itself proof that intelligence has nothing to do with it. Conscious intelligence, with hesitations and weighings of alternatives that are inherent in deliberate thought, will inevitably give rise to *imperfections and variations* from one construction to another . . . a spider or an insect, though born with perfection, cannot deviate from it. . . . A boy [on the other hand] may learn slowly and attain only imperfection at best, but he can attain a *variety of imperfection of his own choosing*" (1972:392-393).

Halliday et. al sound reasonable when they point out: "If we knew more about the nature of learning in human beings we should be better equipped to prescribe methods of teaching. In fact, we know rather little about learning in human beings, although a lot of information about learning in other animals, for example, rats and pigeons, is being amassed" (1964:177). But it is difficult to agree with their observation that many of the "observed facts about learning in experimental animals can be transferred to human learning without much change" (ibid p. 177) It would be too coarse and naive to base theories of language

teaching on findings obtained through the study of animal learning. One does not really know why psychologists argue that general conclusions relating to the structure of cognitive processes in cats and dogs or in rats and pigeons, can be "transferred to man" (cf. Talyzina 1981:315). Chomsky attacks with particular vehemence the behaviourist notion that human language responses are under the control of external stimuli, that the individual is merely the locus of behaviour and not its cause. For Chomsky the most important point of separation of humans from animals is that human beings use language, whereas other animals do not and, therefore, there is no point in applying principles of learning that have been derived from research with animals to explain a form of human behaviour that animals are simply not capable of (cf. Wilkins 1972:169).

2. Another disturbing theoretical limitation of the Skinnerian model arises from its failure to recognize the uniqueness of the acquisition and use of language in the hierarchy of the various forms of learning and behaviour of human beings. He seeks to account for the dynamic characteristics of man's verbal behaviour within a framework appropriate to human behaviour as a whole. "We have no reason to assume", he says, "that verbal behaviour differs in any fundamental respect from non-verbal behaviour, or that any new principles must be invoked to account for it" (cited in Rivers 1964:24-25). It is a fact that certain universal principles or mechanisms are common to all forms of learning but it seems to be equally plausible to hypothesize that the nature of *what* is learnt should be a variable of *how* it is learnt. In other words, it seems to be highly probable that learning is *subject-specific*. The process of learning a language should differ, in certain basic ways, from the process of learning something like history, aviation, pop music or calculus (cf. Rivers 1983:86). Using our common-sense, we can make theoretical statement to say that language learning is an inevitable phase of our maturational growth. No other form of intellectual acquisition is as natural and indispensable to one's survival as a human being as language acquisition is. Besides, the complete mastery of at least one language is basic to all other varieties of learning.

One reason why the lower forms of life cannot learn something like history, computer technology or disco dance is that they do not possess language. I. A. Richards rightly holds that language is "the instrument of all our distinctively human development, of everything in which we go beyond the other animals", while Max Muller decrees that language is "our Rubicon which no brute will cross" (quoted in Sharma, 1979:15). Even Pavlov admitted that it was the word that "made man of us" (Rivers 1964:26). It is through the word that man has achieved the unique gift of neural activity called 'abstraction'. Psychologists themselves disagree with Skinner's view that verbal behaviour "does not differ in any significant way from other behaviour" (ibid p. 26). As a matter of fact, verbal behaviour has a directive and transforming effect on all subsequent behaviour. A.R. Luria and his collaborators, on the basis of their research in this area, convincingly conclude that "speech restructures the cognitive processes of man, enabling him to get a profound orientation in surrounding reality, to distinguish essential features and relations, and to systematize his accumulated experience" (ibid p. 27).

3. The third major drawback of Skinner's theory of learning is that it cannot account for the process of language acquisition by human beings. It cannot tell us what goes on inside the organism which enables it to master a language in such a short time. In his famous review of Skinner's *Verbal Behaviour* Chomsky comments: "one would naturally expect that prediction of the behaviour of a complex organism...would require, in addition to information about external stimulation, knowledge of the internal structure of the organism, the ways in which it processes input information and organizes its own behaviour. These characteristics of the organism are in general a complicated product of in-born structure, the genetically determined course of maturation, and past experience" (ibid p. 26).

Mediational Model

To compensate for some of the deficiencies of Skinner's theory of learning, neo-behaviourists

like Osgood, Mowrer and Staats propounded a more tolerant and less puristic model which is commonly known as the Mediational model. This model includes "the question of thought and mental processes in its analysis of human behaviour and, consequently, the question of meaning in the explication of human language behaviour" (Kess 1976:40). This approach posits possible intermediate processes, functions or steps occurring within the organism itself as a link between the observable stimulus the human organism is responding to and its response which is also observable. It posits a stimulus-response sequence within the organism itself as a mediational stage between the external stimulus and the response. The proponents of the mediational approach consider it necessary to postulate the third variable between observable stimulus and response to account for language behaviour in particular. Certain internal states, called meaning, occur as a response (i.e. *mediational response*) to external stimulus. These internal states then become stimulus (i.e. *mediational stimulus*) which in turn elicits external response. Thus a sequence is formed from external stimulus to external response via internal (mediational) response and internal (mediational) stimulus. With an explanation of the internal states, the proponents of the mediational approach attempt to account for the cognitive processes of language learning and use by human beings.

By recognizing an internal sequence of stimulus and response, the mediational theory certainly makes the language learner more worthy of attention than his predecessor ever was within the Skinnerian model. But we have to note that the mediational model still remains an inseparable part of the S-R Psychology. The whole trouble with the behaviourist school of psychology is that it cannot separate the human from the non-human and that is why no behaviourist model, howsoever sophisticated, can adequately describe and explain human behaviour, including human verbal behaviour. It is almost blasphemous to try to explain man and his mind in terms of stimulus and response, that is, from a vantage point adopted to explain animal behaviour. Recent developments within psychology itself have shown that be-

haviourist theories of language learning and language teaching ought to have been rejected when they were actually rejected in favour of more viable theories.

We can easily justify the rejection of all behaviourist theories of learning and teaching with reference to the very nature of human behaviour, including language behaviour. Since every native speaker is capable of using language in all sorts of untried situations and without easily identifiable reasons, we can readily agree with Chomsky's observation that our normal linguistic behaviour is "stimulus-free and innovative" (1973). The simplistic sequence between stimulus and response does not often operate even in other spheres of human activity. Not only two human beings need not go the same way in any sphere of life; even the same individual need not go the same way twice for the same thing. Such variability of responses between individuals and within an individual certainly calls for a much broader perspective of language teaching than those that were envisaged by the behaviourists.

David Abercrombie, a linguist, tells us that every language has its own distinctive *semantic structure*, that is, the network of linguistic items and interrelationships to classify experiences and to deal with the outside world for the communication of meaning in a way that is convenient to the speech community and that there is no reason for any community to regard the categories of its own language as inevitable and common to all languages (cf. 1970:9-10). Similarly, B.V. Beyayev (1963:51) points out that although the *formal-dynamic* features of thinking such as the capacity to form concepts, generalizations and judgements and the powers of reasoning and analysis are universal characteristics of the human species, people speaking different languages use different *contents* and constructs of thought. The reason why teaching a second language is such a tricky problem is that the learner is required to adapt himself to a system of thought which is different from that of his mother tongue. Learning another language also means learning to think differently. It would have been a miracle if people speaking different languages had an identical system of think-

ing. Had it been so, learning another language would have been a child's play, a simple exercise in translation.

Return to Mentalism

The relatively recent developments of cognitive psychology and Chomskyan linguistics (which is, in fact, "a branch of cognitive psychology" cf. Kess 1976:2 and 44) clearly indicate a radical departure from the prevalent behaviourist position in almost all respects. By concentrating on the mental processes involved in the acquisition of language, these psychologists and linguists heralded a definite return to what Wilkins calls "mentalism" (cf. 1972:168). These mentalists believe that human beings acquire language not because they are socially conditioned but because they possess an inborn capacity which is peculiar to the human species. This innate capacity to acquire language is both *species-specific* and *species-uniform*. Chomsky believes that every human child comes into the world with an innate language learning ability, a genetically determined faculty which takes the form of a "language acquisition device" (LAD) that proceeds not through the stimulus-response-reinforcement sequence as behaviourists maintain, but through problem-solving and hypothesis-testing (cf. Wilkins 1972:269). Since children are genetically equipped to learn any language as a native tongue, it is possible to surmise that the LAD contains principles of universal grammar. The process of language acquisition by the child, according to Chomsky, is mainly determined by "forces within the child who brings to the learning situation, the seeds of his own development" and the learning situation made available by a cultural group is only a precondition for the activation of the LAD (cf. Clark 1975). The child's specific, genetically determined language learning capacity is a function of his general cognitive capacity. The child acquires a language by making hypotheses about the form of the language he is surrounded with on the basis of the universals of language contained in his LAD and because he has an innate knack for solving problems. In this way, the child internalizes the

grammar of the language he is flooded with and acquires *competence* that makes *performance* possible. It is his competence that enables the native speaker to produce and interpret an infinite number of novel sentences (cf. Rivers 1983:6). Thus we find that within the cognitive framework the learner enjoys a privilege which he could not have expected in any other framework. The Chomskyan paradigm mainly focuses on the unique gifts of the language learner. Any theory of second language teaching which bases itself on this paradigm would have to place the learner at the centre.

Chomsky's insistent emphasis on the language learner's 'competence' is universally acknowledged as a landmark in the history of language learning theories but it is not generally realized that in its almost fanatical enthusiasm for the learner's LAD and the uniqueness of his linguistic competence, the Chomskyan paradigm de-emphasizes the learner's linguistic 'performance' which is the primary concern of second language teaching. Generative grammarians generally tend to ignore "the daily use of language by ordinary people in real situations in a noisy world. No amount of logic and precision can make tolerable the elimination of a variable human talker and perceiver from the linguistic equation" (Obrecht 1971). It is to be regretted that an excessive devotion to the notion of competence has so unfortunately, though naturally, led to a systematic devaluation of performance. Even if less basic, linguistic performance, particularly in the field of second language learning, is a fact of our daily experience. As it is not trivial, it must be adequately accounted for "no matter what anyone says" (ibid). Krashen rightly points out that behaviourist theories failed to apply successfully to language teaching because they were, simply, not theories of language acquisition and similarly, the TG model has failed because it turned out to be a theory of competence and not "a theory of the process of language acquisition" (1982:6). It should also be noted that the whole gamut of language learning activities, particularly second language learning activities, cannot be entirely "stimulus-free and innovative" as Chomsky believes it is. In spite of Chomsky, we have reasons to believe that the en-

vironment plays an important role in determining the kind of language learning a learner learns. The cultural component of language learning is something that cannot be lost sight of by anyone who is interested in formulating an effective model of second language teaching. Drills and pattern practices certainly play a part, however minimal, in the acquisition of a second language and we must acknowledge that Skinner and his followers had a point. Besides, with an increasing emphasis on the cognitive processes of the L₁ learner, psychologists gradually have come to accept as innate only certain cognitive and perceptual processes that are basic to *all* forms of learning and not just a *specific* language learning capacity as Chomsky has hypothesized (cf. Rivers 1983:20 and Corder 1981:2). By the way, we may recall that here we are not saying what Skinner has said when he equated language learning with all forms of learning. As it has been pointed out earlier, we surmise that probably the learner does not learn a language exactly in the same way as he learns other subjects. We believe that the learner's *modus operandi* of learning a language should differ in certain basic ways from that of learning history or calculus or whatever. It needs to be made explicit that here we are not saying that the learner's language learning capacity has a unique genetic structure as Chomsky believes it has.

Hypothesis-testing Approach

Notwithstanding such reservations about the generative grammarians' all-absorbing, even obsessive, devotion to competence and LAD as noted above, we have to acknowledge that the hypothesis-testing approach to L₁ acquisition, as postulated by the generativists, has been endorsed by L₂ acquisition researchers who use the term *interlanguage* to describe the systematic language an L₂ learner uses at a particular stage of learning. This interlanguage is regarded as an indication that L₂ learners too test their hypotheses about the form of the grammar of the target language (cf. 1983:10). Corder is of the view that some of the "strategies adopted by the learner of a second lan-

guage are substantially the same as those by which a first language is acquired" (1981:8)

Unlike the generative devotion to L₁ learner's competence, the major concern of this approach, usually called Error Analysis, is concentration on the L₂ learner's performance. It is remarkable that, for the first time, the learner is allowed complete autonomy, as it were, by error analysis which focuses on the learner in a way and to an extent that no theory, not even the generative one, had ever done. Though not the final word on second language teaching, error analysis is definitely the most democratic and humane approach to this mind-boggling problem. It reminds us of Humboldt's prophecy that the only way to teach language is to create conditions in which it will develop spontaneously in the mind of the learner (cf. Corder 1981:12). Learners have to be taught in a way that they learn. To quote Alexander pope: They "must be taught as if you taught them not" (quoted in Rivers 1983:102). This mode of teaching can be formulated only when we learn more about *what* and *how* and *when* the learner wants to learn. It is not surprising, therefore, that those who are genuinely interested in viable teaching techniques and procedures now frankly acknowledge: "We may be able to allow the learner's innate strategies to dictate our practice and determine our syllabus; we may learn to adapt ourselves to *his* needs rather than impose upon him *our* preconceptions of *how* he ought to learn, *what* he ought to learn and *when* he ought to learn" (Corder 1981:13). There is a growing realization among second language teaching researchers that one of the most effective ways of learning more about the learner's intelligence, aptitude and problems is to regard his performance errors as parts of a developing system and to analyse them in order to understand that system. "A learner's errors", says Corder, "provide evidence of the system of the language he is using ... at a particular point ... (and it must be repeated that he is using some system, although it is not yet the right system" — *ibid* p. 10).

Linguistics widely agree that error analysis has two functions: the first is a theoretical one and the second a practical one. The theoretical function is related to the methodology of investigating the

psychological processes of language learning so as to relate the knowledge of the learner at a particular moment in his career to the teaching he has been receiving, while the practical function is related to guiding the remedial action that is necessary to correct an unsatisfactory state of affairs for the learner or the teacher (*ibid* p. 45). A systematic analysis of the learner's errors is significant in three ways: (i) it can tell the teacher how far the learner has progressed towards his goal, (ii) it can tell the L₂ acquisition researcher what strategies or procedures the learner has been employing in his discovery of the target language, and (iii) finally, it can furnish the learner with an authentic record of devices which he has so far used in order to learn the target language as well as with an indication of what he might do to move faster and more satisfactorily towards his goal (cf. *ibid* pp. 10-11).

As teachers and parents we have always known that language learners regularly make errors in the process of learning a language (whether L₁ or L₂). These errors, however, can be viewed in different ways. The popular, traditional way of looking at errors has been to consider them unfortunate but inevitable signs of human fallibility. 'To err is human', we have been repeating for ages. But the traditional view also believes that errors can be totally prevented by making teaching and learning maximally efficient. Another attitude to errors has been defined by contrastive linguists. According to the logic of contrastive analysis, errors in the learning of a second language occur as a result of the "interference" of the learner's mother tongue. Interference and 'negative transfer' affect language learning only in areas where the target language differs from the learner's mother tongue. The errors of the L₂ learner are thus easily predictable and, hence, avoidable if the teacher were furnished with a sophisticated contrastive analysis of the learner's L₁ and L₂. Whatever contrastive linguists may say, our day-to-day experience with L₂ learners reveal that they make errors which are not at all relatable to psycholinguistic functions like interference and negative transfer. The existence of such errors calls for a fresh look at the whole problem and gives rise to the approach called error

analysis. This approach persuades us to see errors committed by L₂ learners as an inevitable, indeed a necessary part of the language learning process. By treating errors as inevitable and necessary, the L₂ teaching analyst may gain an insight into the learner's state of knowledge at a particular moment in his career as well as into the strategies and devices employed by him in learning the language. With such insight, the analyst may suggest appropriate corrective measures so that second language teaching becomes a much more meaningful exercise than it has so far been. Error analysis

enables us to view the learner's performance in the target language as his own version of a systematic, necessary and rule-governed set of activities. This structurally systematic and actual "language" of the second language learner has been variously called "interlanguage" (Selinker), "interlingue" (James), "approximative systems" (Nemser) and "transitional competence" (Corder cf. Corder 1981:66). To sum up, we might claim that the theory of error analysis and concepts like interlanguage have certainly opened up new horizons of second language teaching.

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Bertrand Russell's Views on Education

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EVEN though Bertrand Russell's major contributions in education were made during the period 1926-35, they are still worthwhile for a number of reasons. First, his critical insights into certain matters—the place of science and humanities in curriculum; the influence of the church, the state, and the crowd upon education; proper balance between individualism and conformity; democratic education; research and teaching in higher education; and the promotion of international peace through education—are still quite pertinent today. Second, it is worthwhile to study Russell because of his contagious faith in education when it is properly conceived and carried out. Third, the Beacon Hill School, an unorthodox and quite progressive school, is of historical importance. It was one of the few progressive schools in England during the third and fourth decades of this century. Fourth, it is important to know of Russell's influence upon analytic philosophy, which is only now making itself felt in educational circles. Finally, it is rewarding to read Russell because of his masterful style of writing.

To a very large extent, Russell's writings on education may be characterized as a protest against the control of these agencies—the state, the church and the crowd. He sees the individual

submerged in a sea of propaganda which emanates from the state and which is taught in schools staffed with teachers who are civil servants primarily concerned with appearing patriotic and maintaining their jobs. Equally repulsive to him is the prospect that many children will continue to receive their education from schools operated by the church. The church is an institution which historically has been almost solely dominated by a concern to perpetuate a body of dogma. In spite of his concern over the influences of the church and the state, Russell does hold that some reconciliation of individuality with the responsibilities of citizenship is necessary. Another force influencing education is the crowd. Russell believes that the influence of the crowd on education can be used for positive ends but, if exercised frequently, is a detrimental factor in character development.

Russell thinks that the problem of his time is of the relation between the individual and the surrounding culture. In terms of their relation the pupil is overwhelmed by external demands. He is a means to an end, the clay on the potter's wheel. The result of all this is a spurious morality, a morality in which conduct is divorced from consideration of consequences. Russell says that as long as education is dominated by undesirable

controls, there is little chance of escape from a worldwide situation of mutual hatred and distrust. The situation has become so intolerably tense, so charged with hatred, so filled with misfortune and pain that men have lost the power of balanced judgement which is needed for emergence from the slough in which mankind is staggering.

Influence of Superstition on Education

In all the stages of education, the influence of superstition is disastrous. Many children have the urge to think; inconvenient questions are met with 'hush', 'hush', or with punishment. Collective emotion is used to instil certain kinds of beliefs, more particularly of the nationalistic kind. Capitalists, militarists and ecclesiastics cooperate in education, because all depend for their power upon the prevalence of emotionalism and the negation of critical judgement. With the aid of human nature, education succeeds in increasing and intensifying the propensity of the average men to avoid thinking.

Another way in which superstition damages education is through its influence on the choice of teachers. For economic reasons, a woman teacher must not be married. For moral reasons, she must not have extra-marital sexual relations. And yet everybody who has taken the trouble to study morbid psychology knows that prolonged virginity is, as a rule, extra-ordinarily harmful to women. It is so harmful that in a sane society, it would be severely discouraged in teachers. The restrictions imposed lead more and more to a refusal, on the part of energetic and enterprising women, to enter the teaching profession. This is all due to the lingering influence of superstitious asceticism.

Another harmful effect of superstition on education is the absence of instruction about the facts of sex. The main physiological facts ought to be taught quite simply and naturally before puberty at a time when they are not exciting. At puberty, the elements of an unsuperstitious sexual morality ought to be taught. Boys and girls should be taught that nothing can justify sexual intercourse unless there is mutual inclination. They should be taught

the dangers of venereal disease, and the methods of prevention and cure. The increase of human happiness to be expected from sex education on these lives is immeasurable.

Religion in Education

In so far as education is influenced by institutional religion, it controls ancient foundations and in many countries also controls the state. For instance, in England, all public schools and all preparatory schools are either Anglican or Roman Catholic. The bad effects of religious education depend partly upon the particular doctrines taught and partly upon the mere insistence that various doubtful propositions are professed to be true. Whether these propositions are in fact true or not may be undiscoverable, but in attempting to make the young regard them as certain religious teachers do not give any reasons in support of their assumptions but merely quote certain religious authorities. Take, for example, the future life. On this matter, wise men confess their ignorance: the evidence is insufficient and suspense of judgement is only a rational attitude. But the Christian religion has pronounced in favour of a future life and the young who are brought up under its influence are taught to regard survival after death as a certainty. What does it matter? The reader may ask. Russell thinks that it does harm in certain ways. The first is that any exceptionally intelligent child who discovers by reflection that the arguments for immortality are inconclusive will be discouraged by his teachers or perhaps even be punished. Other children who show any inclination to think likewise will be discouraged from discussing such topics. Secondly, it is impossible to instil scientific spirit into the young so long as any propositions are regarded as sacrosanct and not open to question. It is of the essence of scientific attitude that it demands evidence for whatever is to be believed, and that it follows the evidence regardless of the direction in which it leads.

Today, the Church of England and the Catholic Church in France are powerful influences affecting education. In the United States, the Catholic

and some Protestant Churches directly control education. As early as 1932, Russell said, "It is in education, more than anywhere else, that institutional religion is important at the present day".¹ There is every reason to believe that Russell held this conviction to the last days of his life.

Russell is persuaded that the most damaging influence in religious education is the teaching of doubtful propositions as truth. It may be impossible to discover whether the religious doctrines are true or false, but they are presented as truth if an attempt to make the young accept them. In the opinion of Russell, it is more honest to consider them emphatically not certain. Not only are pupils taught to believe that which may still be open to question, but teachers are forced into the position of having to close their minds. They cannot openly question the doctrines of the Church for fear of losing their jobs or for fear of 'losing their souls'. Both teachers and pupils become timid and conventional. Where propositions are considered sacrosanct, it is impossible to develop the scientific frame of mind. Russell opines that religion tends to conserve much of the past that is bad. For example, the belief in hell-fire and damnation is still used as a justification for the punishment of children and the ill-treatment of criminals. Furthermore, the Church seems quite willing to justify war.

Finally, Russell opposes the control of education by the Church on the ground that the Church tends to undermine and under-estimate the intellectual virtues of toleration and impartiality and so contributes liberally to prejudice, religious bigotry and bias.

Sex in Education

It is important that information on sexual subjects should be given in exactly the same tone, and in the same manner, as information on other subjects. And, it should be given with the same directness. To a child who has not been corrupted by the prudery of his elders, sex seems a perfectly natural subject just like any other. Before puberty, there is no difficulty whatever in causing a child to remain

natural about sex and to view it exactly as he views other subjects. But the difficulty, even after adolescence, will be very much less when children have been brought up sanely than when their minds have been filled with irrational terrors and taboos.

The problems which arise for older boys and girls are difficult to treat apart from some positive sexual ethic. The usual view is that complete continence should be practised, and that it cannot do any harm. In England, all hetero-sexual experience is prevented by segregation of the sexes, except in the case of a few usually enterprising youths. There is consequently a tendency among the more enterprising to homosexuality, and among the more timid to masturbation. Boys are told and many of them believe that these practices are wicked and harmful. They have to be furtive since, if discovered, they are visited by severe punishment. In public schools, there is a tendency to sacrifice intelligence to virtue by keeping the boys so busy and so tired physically that they will have neither leisure nor inclination for sex. The existing system thus has the following disadvantages: first, it plants superstitions terrors in the minds of boys. Secondly, it causes a large percentage to become timid hypocrites. Thirdly, it makes thought and feeling on sexual subjects obscene and superstitious. Fourthly, it causes scientific curiosity to appear sinful, so that it either decays or becomes morbid. Fifthly, it leads to discouragement of leisure, and, therefore, of intellectual growth.

The moral attitude of schools and of British universities remains much more rigid than that of the world at large, with the result that education becomes increasingly out of touch with the society for which it is supposed to be preparing young people. While public opinion and social institutions remain what they are, Russell does not think that any clear-cut solution is possible, because of the fundamental incompatibility between sex equality and patriarchal family. In spite of this incompatibility, Russell thinks, however, a good deal can be decided by general ethical principles and by the refusal to treat sex in a superstitious manner.

It is important in all dealings with the young to prevent them from acquiring the notion that sex is something inherently nasty and furtive. Sex is an

interesting subject, and it is natural to human beings to think and talk about. At present, this entirely natural desire on the part of the young is treated by the authorities as something wicked, with the result the young acquire even more interest in the subject than they would naturally have, and converse about it continually with all the pleasure of the forbidden fruit. Their conversation is necessarily ignorant and foolish, because they are left to their own guesses and their own half-knowledge. The whole subject of sex becomes to most boys a matter of sniggering and dirty stories. The whole conception of sex as a matter of natural delight rising on occasion to poetry, sometimes light-hearted and gay, sometimes passionate with a tragic profundity, lies outside the purview of the pedagogic moralists, to whom sex is wicked when it is combined with delight, and virtuous only when it is drab and habitual. Poetry and joy and beauty are thrust out of life by this morality of ugliness and something stark and rigid is brought into all human relationships. It may be that a free outlook also has its dangers, but they are the dangers of life and not of death.

Influence of Politics on Education

The harm that is done to education by politics arises chiefly from two sources: first, that the interests of a partial group are placed before the interests of mankind, second, that there is too great a love of uniformity both in the herd and in the bureaucrat. Of these two evils, at present, the first is greater, but if the first were overcome, the second might become very grave.

It has been the custom for education to favour one's own religion, the male sex and the rich. In countries where various religions exist side by side, the state is not able to favour any one of them in its schools, but this has led to the creation of schools belonging to various sects. Education, outside Russia, is still so conducted as to further the interests of the rich, and of course, it teaches an exclusive loyalty to one's own state everywhere. The result of this state of affairs is that education has become part of the struggle for power between

religious classes and nations. The pupil is not considered for his own sake, but as a recruit. The educational machine is not concerned with his welfare, but with ulterior political purposes.

There are those who would agree that education has been used by the state to preserve the status quo and to teach hatred towards others, living outside the country. In *The Scientific Outlook*, Russell describes what education might be like in a thoroughgoing scientific society devoid of 'reverence'. He defines the scientific society as one in which intended results can be produced. The greater the number of results that it can intend and produce the more scientific is the society. In a scientific society, the rulers would provide one kind of education for ordinary men and women, and another kind for the rulers.

To sum up what Russell thought about the state's using education to preserve the status quo, he found some states guilty of attempting to develop loyal citizens willing to go to war regardless of the cause. The states tended to ignore the individual and his happiness. Independence of judgement was forgotten, discouraged, or deliberately rooted out.

The real question in Russell's mind had been: Shall the state finance education designed to produce a good individual or shall it attempt to produce a good citizen? Russell had been convinced for sometime that the cultivation of the individual mind is not the same thing as the cultivation of a useful citizen. Different people who will bear different ideas about what constitutes the good individual, Russell grants this, but he reminds us at the same time that he thinks of the good of the individual. First and foremost, he argues that the individual should mirror the world. Russell does not claim to be able to say precisely why he believes this desirable except that knowledge and comprehensiveness appear to him to be glorious attributes. Russell is not content with a man who mirrors the world: he wishes the world to be mirrored with emotion, and with a specific emotion that is appropriate to the object, and with a general joy in the mere act of knowing. Russell holds that the elements of knowledge and emotion do not make an individual social. It is only

when will and the exercise of the power are present that the individual becomes an effective member of a community. He should be interested in bringing about harmony among the various wills and exist within a community. The individual is somewhat self-sufficient but as a citizen he is circumscribed by his neighbours. At any rate, Russell seems to feel that the fundamental characteristic of the citizen is that he cooperates, in intention, at least, if not in fact. But such a citizen, unless he is the exception, will look about for some readymade purpose with which to cooperate. Then he becomes a subject of the herd. Although Russell's writings stress the individual, he disclaims rebellion, for, in and of itself, rebellion is not better than acquiescence.

Russell has consistently maintained that before one can decide how to educate, one must first have some idea of the kind of person he wishes to create. Russell would wish to develop people who were inspired by love and guided by knowledge. At the very outset of *On Education*, Russell made it abundantly clear that he is trying to set forth as ends for education those qualities which he considers excellent in all men and women. He acknowledged that there are some qualities which are desirable, but which need not be produced in all men.²

The four essential and universal characteristics which jointly constitute Russell's aim for education are vitality, courage, sensitiveness, and intelligence. The first three deal with character development and are to be chiefly realized relatively early in the child's life, mainly in the home and in the nursery school to be modelled after Montessori's. Intellectual development, on the other hand, takes place mainly after the age of six, and should be continued through the university for those of exceptional academic ability.

These three aims—vitality, courage, and sensitiveness—are fundamental to character development. If the job of character development is properly handled in the early years, it will demand little attention thereafter. The cultivation of intelligence is not independent of these objectives of character development, but its development can be delayed until the child has reached the age of six years. The cultivation of intelligence is the aim,

however, which our schools deliberately and systematically must seek to achieve, while at the same time correcting character deficiencies or continuing character education.

Russell certainly has contributed to the development of the philosophy of analysis and as he recently put it, "Philosophical Analysis is desirable for a philosopher". Such words as 'consciousness' and 'experience' should be carefully defined if one is a philosopher. Philosophical Analysis might be quite helpful in education.

Through the writings of Russell and by the word of mouth, the work done at Beacon Hill became known, especially to British progressive educators, and, to some degree, to American progressives. Only recently, one of the authorities of primary education in England remarked, concerning Beacon Hill, 'I should think it was quite successful in accomplishing what the Russell wanted to do'.

Competition in Education

In education, the ideal of competition has had many bad effects. On the one hand, it has led to the teaching of respect for competition as opposed to cooperation, especially in international affairs; a vast system of competitiveness in the classroom, and in the endeavour to secure scholarships and subsequently in the search for jobs. One of the worst defects of the belief in competition in education is that it has led to a great deal of over-education. At present, education is damaging imagination and intellect, and even the physical health of the students.

Freedom in Education

Education may be viewed from a many standpoints: that of the state, of the Church, of the school master, of the parents, or even of the child itself. Each of these points of view is partial; each contributing something to the ideal of education, but also contributes elements that are bad. For instance, the state wants the child to serve for national aggrandizement and the support of the existing

form of government. The Church wants the child to serve for increasing the power of the priesthood. The school master, in a competitive world, too often regards his school as the state regards the nation and wants the child glorify the school. The parents want the child to glorify the family. The child itself, as an end in itself, as a separate human being with a claim to whatever happiness and well-being may be possible, does not come into these various external purposes except very partially. Unfortunately, the child lacks the experience required for the guidance of its own life and is therefore a prey to the sinister interests that batten on its innocence.

Freedom of opinion, on the part of both teachers and pupils, is the most important of the various kinds of freedoms, and the only one which requires no limitations whatever. The fundamental argument for the freedom of opinion is the doubtfulness of all our beliefs. If we certainly knew the truth, there would be something to be said for teaching it. But, in that case, it could be taught without invoking authority, by means of its inherent reasonableness. When the state intervenes to ensure the teaching of some doctrine, it does so because there is no conclusive evidence in favour of that doctrine. "The result is that the teaching is not truthful even if it should happen to be true". In the state of New York, it was still lately illegal to teach that communism is good; in Soviet Russia, it is illegal to teach that communism is bad. No doubt one of these opinions is true and one false, but no one knows which. The difference between truth and truthfulness is important in this connection. Truth is for the Gods; from our point of view, it is an ideal, towards which we can approximate but which we cannot hope to reach. Education should fit us for the nearest possible approach to truth and for this, it must teach truthfulness. Truthfulness is the habit of forming our opinions on evidence and holding them with that degree of conviction which the evidence warrants.

Russell thinks that education can play an important role for the setting up of an ideal society. He insists that education ought to emphasise scientific methods of inquiry rather than mere transmission of a set of dogmas. He refuses to com-

promise with those who adopt persecution, censorship and other controls over education. He stresses that what is needed in education is not an uncritical acceptance of views but an attitude of scientific inquiry. Students ought to be taught to base their beliefs upon observation and inference. Their beliefs must be free from dogmatic bias. It is only in the spirit of free inquiry that desirable learning can take place. The substitution of evidence for dogma, as a basis for belief, is one of the greatest that science has conferred upon mankind.

For the establishment of peace-loving, happy and healthy society, Russell suggests that education should be tackled at the international level. He proposes the establishment of an International University for this purpose. It was during the Second World War that Russell suggested the establishment of such a university by publishing 'Proposals for an International University' in the *Fortnightly* (Vol. Cl. VIII, July 1942, pp. 8-16). His theme was that international control of education is necessary if the world is to escape the savages of such wars in future. He felt that his proposed university would be welcomed by many men of science. It would relieve men of these goodwill of a weight upon their conscience. Such men, Russell felt, were grievously oppressed because their discoveries and inventions were being used for destructive purposes and making war even more terrible.³

Russell wanted a society in which people would be inspired by love and guided by knowledge. Education must enable young people to understand the problems raised by the present world situation. One of the great things that education can and should do is to give us the power of seeing the general in particular. We must realize that what happens to "others" may also happen to us. And, what has happened through many ages may continue to happen in future.

The imparting of education should have two objects. On the one hand, it should give skill; and on the other, wisdom. Russell asserts that although scientific skill is necessary, it is by no means sufficient. Skill without wisdom may be purely destructive and is very likely to prove so. Russell says, "It is necessary that those who receive scientific

education, should not be merely scientific, but should have something of that kind of wisdom which, if it can be imparted at all, can only be imparted by the cultural side of education".² Science enables us to know the means of any chosen end, but it does not help us to decide what ends we shall pursue. If we wish to exterminate the human race so numerous that all are on the very verge of starvation, it will show us how to do that. If we wish to secure adequate prosperity for the whole human race, science will tell us what we must do. But it will not tell us which of these ends is more desirable than the others. Nor will it give us that instinctive understanding of human beings which is necessary for measures are not to arouse fierce opposition which only ferocious tyranny can quell. It cannot teach us patience, it cannot teach us sympathy;

and, it cannot teach us a sense of human destiny. These things, in so far as they can be taught in formal education, are most likely to emerge from the learning of history and great literature.

Russell did not develop a scientific theory of education, although his work is based upon the findings of certain social scientists. That is to say, he used science, but he was not a scientist trying to develop a scientific theory of education. Russell's ideas on education should be treated as hypotheses, formulated by a widely read and very wise man, which remain to be substantiated by scientific investigation. His theory of education, if it may be called that, is not scientific. According to Russell, the aim of education should be to produce an ethical person—one who lives a life inspired by love and guided by knowledge.

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Strategies for Better Teaching

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"COLLEGES of Education at the elementary as well as the secondary level in India and in other parts of the world have been founded on the premise and perpetuated in the hope that the ability to teach can be taught" (Hadden, 1977). It is assumed that those who possess an adequate mastery over the subject can become effective teachers through the teacher education programme. Besides, those who fortunately possess a certain inborn talent for teaching may also profit from the programme. Programmes of teacher education are thus designed, *inter alia*, to develop among prospective teachers the ability to teach.

The objectives of programmes of teacher education for the secondary stage are, in general, to help prospective teachers to:

- a) develop understanding of the psychological principles of child growth and development, individual differences, and cognitive, psychomotor and attitudinal learnings,
- b) develop skills, understandings, interests and attitudes which would enable him to foster an all-round growth and development of the children under his care;
- c) possess competence to teach subjects of his specialization on the basis of accepted principles of learning and teaching,
- d) develop skills in identifying, selecting, innovating and organizing learning experiences for teaching general and special subjects,
- e) possess sufficient theoretical and practical knowledge of health and physical education, games, and recreational activities and work experience.

An analysis of the objectives of the teacher education programmes and the curriculum designed to realize these objectives in general reveals that there is a greater emphasis on developing among prospective teachers theoretical knowledge about theories and conditions of learning, characteristics of learners at different stages of development, development of desirable attitudes and interests, etc. The aspect relating to the process of teaching is relatively neglected in the programme of teacher education. In this domain, an emphasis is laid on the teaching of Herbertain steps, maximum of teaching, certain methods of reading, etc. only. Quite recently the analytic approach to teaching and the acquisition of teaching

skills through the microteaching approach is emphasized in some universities. Inadequate emphasis on the process of teaching has rendered the existing programmes of teacher education less effective and the 'ability to teach' is hardly developed to a satisfactory level. The reasons for inadequate emphasis on the teaching aspect are highlighted below:

'The practice of teaching has long been limited by a lack of refined knowledge about the roles, goals, designs and strategies of instruction. As a consequence, teachers still tend to teach as they themselves were taught employing a minimum of critical analysis of the particular instructional procedures' (Stiles, 1974). Stiles further highlights that the programmes of preparation for teachers, likewise in the absence of refined theoretical and research guidelines, typically aim to transmit to prospective teachers accumulated examples of the techniques that successful teachers have used. Stiles further mentions that the process of learning to teach is largely based on trial and error in which new professionals may perpetuate the weaknesses as well as strengths of their tutors without being aware of the differences.

Whereas a number of theories of learning and development were developed by researchers long back and recent works of Piaget, Bruner, Ausubel, etc. have further made significant contributions in the field, research on teaching is relatively a new area of human inquiry. Gage (1963), Flanders (1971), Bellack (1964), Allen and Ryan (1969) have, however, recently made some contributions in this area. Scholars have recently begun to reject the folklore that the teaching process is incapable of being objectively analysed. It is now increasingly being realized that teaching can be studied objectively and successful instructional approaches and instructional strategies can be identified and taught.

Gage (1963) explains that the relative neglect of theories of teaching has probably taken place because it may be in the minds of researchers that if there is a satisfactory theory/theories of learning, then the teacher can act upon that theory without developing a separate theory of teaching. There is no doubt that some implications for teaching have

been drawn from theories of learning and development, but these theories have not been adequate for the development of theory/theories of teaching. Smith (1961) further mentions that the processes of teaching and learning are different. Teaching cannot be treated as a mirror image of learning. Since the process of teaching is different from the process of learning and theories of learning and development are not adequate for developing/strengthening the process of teaching, there is a need for a separate theory/theories of teaching for improving the process of teaching. Further, existing knowledge in the domain of teaching process is inadequate to develop a theory/theories of teaching to improve the teaching-learning process.

Theory of Teaching

Bruner (1966) makes a nice distinction between theories of learning and development and a theory of teaching. He mentions that the former theories are descriptive in nature. They simply describe the process of learning, i.e. how learning takes place. 'They tell us what happened after the fact' (Bruner 1966). For example, they tell us that children at the pre-operation stage do not possess the notion of reversibility. They do not specify as how to develop the notion of reversibility among them. A theory of teaching, on the other hand, is prescriptive. It is prescriptive in the sense that it sets forth rules concerning the most effective ways of helping children to achieve knowledge and develop skills. It must attempt to set forth the best means of maximizing learning on the part of children. It also provides a yardstick for evaluating any particular way of teaching. A theory of teaching, in short, lays stress upon improving the process of teaching thereby maximizing learning rather than describing the process of learning. 'A theory of instruction might attempt to set forth the best means of leading the child at the pre-operational stage of development toward the notion of reversibility' (Bruner, 1966).

Gage (1963) mentions of two kinds of theory on teaching. The first one explains why teachers behave as they do in teaching. The second kind of theory explains how the behaviour of teachers can

influence learning of pupils.

The said description regarding the need for a theory of teaching does not imply that theories of learning and development are irrelevant to a theory of teaching. Both of them are closely related. A theory of teaching needs to be congruent with these theories of learning and development to which it subscribes.

According to Bruner (1966), a theory of instruction has four major features which are mentioned below in brief.

- a) Firstly, a theory of instruction should specify the experiences which should implant effectively in an individual a predisposition towards learning. The relationship between the teacher and the taught determines to a great extent his disposition towards learning. There is always a special problem of authority involved in the instructional situation. The theory of teaching should specify the regulation of this authority relationship at pre-school, elementary, secondary, higher secondary level, etc. Further, the attitude towards intellectual activity differs in different ethnic groups, social groups, age groups, and the two sexes. The theory of instruction should specify the ways for achieving instructional goals in respect of pupils having a specific pattern regarding use of mind.
- b) A body of knowledge in any domain needs to be structured in a way that it is easily grasped by the teachers. According to Bruner (1966), mode, economy and power are the ways for structuring knowledge in any domain. The mode stands for the medium for presenting the knowledge. This depends upon the stage of intellectual development of the pupils. It may thus be enactive or iconic or symbolic representation in the light of the stage of pupils' intellectual development. Economy refers to the amount of information that needs to be presented so that it is easily processed by learners and comprehended. The effective power of any particular way of structuring a domain of knowledge for a particular learner refers to the generative value

of his set of learned propositions. The theory of teaching should throw ample light in the area of structuring knowledge in any domain.

- c) The sequences in which material is presented to the learners determines to a great extent the learning on pupils' part. There cannot be a unique consequence suitable for all the learners. Sequences need to be varied in the light of pupils' cognitive stage of development, their cognitive structure, nature of the learning material, pupils' learning style, etc. The theory of teaching should specify the most effective sequences in which learning material may be presented to different sets of learners so that it is easily grasped by them.
- d) The nature and pacing of reward and punishment in the teaching-learning process needs to be specified. Extrinsic rewards foster pupils' learning. But as the learning progresses there is a need to shift from extrinsic reward to intrinsic reward inherent in solving a complex problem by the pupil himself. Further, there may be a point in the learning process when immediate reward for desirable performance may be replaced by deferred reward. The theory of teaching needs to specify the point/conditions of this shift from extrinsic to intrinsic and immediate to deferred reward.

The Concept of Strategies for Teaching

Since the teaching aspect has relatively been neglected, the theory of teaching has not so far been evolved by researchers. In the absence of a theory/theories of teaching, the question arises as to what procedures a teacher should follow in the classroom? Should he be allowed to develop a teaching style that works in his work situation and stick to it for all time to come? The obvious answer to this question would be that we should not allow such things to happen in the interests of our students. It is true that theory/theories of teaching are not available as yet, but there are a number of teaching strategies/models of teaching which have been developed by researchers to realize specific

instructional goals. These strategies have been developed on the assertion that a single and best way to teach does not exist and as such different teaching strategies are required to realize different instructional goals. A teacher, to be effective, should be able to recognize different kinds of instructional goals and select an appropriate teaching strategy to realize the goals.

Models of teaching are prescriptive teaching strategies (Eggen et al, 1979). They differ from general approaches of teaching in that they are designed to realize specific instructional objectives. General approaches of teaching are considered to be applicable to all teaching situations. Models of teaching are not cure-alls or applicable to all teaching situations. They are rather prescriptive teaching strategies to realize specific instructional goals. For instance, if the instructional goal is to help children to attain concepts, the teacher should select the Concept Attainment Model designed by Joyce and Weil (1980). Further, if the instructional goal is to develop inquiry skill, the teacher should use Suchman's Inquiry Training Model for realizing this instructional goal. If the teacher's instructional goal is to develop creative thinking the problem-solving approach among children, he should make use of the Synectics Model. Turner's model can help the teacher to diagnose the learning difficulties of his pupils. Using Flanders' model, the teacher can generate a lot of interaction in the classroom and thus improve pupils' learning. Thus different teaching strategies are required to realize different instructional goals.

A model of teaching has been defined by Joyce and Weil (1980) as a plan or pattern that can be used to shape curriculum (long-term courses of studies), to design instructional materials and to guide instruction in the classroom and other settings. DeCecco (1968), making a distinction between teaching models and a theory of teaching, says that models do not have the rigour of tested theories. Some useful models/teaching strategies may eventually give way to empirically tested theories.

A teaching strategy is not a substitute for teaching skills. They are rather complementary. A

teacher after having selected an appropriate teaching strategy to match the identified instructional goal, is required to make use of requisite teaching skills which are essential in the use of the selected model of teaching.

Teaching Strategies

Different researchers have developed different models of teaching/teaching strategies. Mosston (1972) in his book 'From Command to Discovery' has discussed seven models. Stalling (1977) has developed five models of teaching—Exploratory Model, Group Process Model, Cognitive Development Model, Programmed Model and Fundamental Model. Brady (1985) in his book entitled 'Models and Methods of Teaching' has discussed five models—Exposition Model, Behavioural Model, Cognitive Development Model, Interaction Model and Transaction Model. Lapp, Bender, Ellenwood and John (1975) have also discussed four models in their book. Six information processing models have been discussed by Eggen, Kauchak and Harder (1979) in their book—'Strategies for Teachers'.

Joyce and Weil (1980) have done a monumental work in this area. They have identified models of teaching which aim at fostering development in the cognitive, affective and psycho-motor domains of an individual. They have classified twenty-three models of teaching identified by them into four families—Information Processing Models, Personal Models, Social Interaction Models and Behavioural Models.

Information Processing Models

The goals of information processing models are to help individuals to acquire knowledge through an analysis of data from the world around us. They aim at intellectual development of pupils. The development of pupils' intellectual skills and their acquisition of knowledge are the specific goals of these models. The specific goals of each of these models are given in Table 1.

Personal Models

The goals of models belonging to this family are to foster the development of pupils' self-image, creative thinking, creative problem-solving, self-understanding, etc. These models are mentioned in Table 2.

Behavioural Models

These models emphasize changing the external behaviour of pupils, i.e. visible behaviour rather

than underlying psychological structure and the unobservable behaviour. These models are mentioned in Table 3.

Social Interaction Models

The models from this family emphasize the development of capabilities for inter-personal relationship. They lay stress on the development of those skills which help an individual to interact with others and engage meaningfully in democratic processes. These models are mentioned in Table 4.

Table 1

Information Processing Models

Model	Major Theorist	Mission or Goals for which Intended
Inductive Thinking	Hilda Taba	Designed primarily for development of inductive mental processes and academic reasoning
Inquiry Training Scientific Inquiry	Richard Suchman Joseph J. Schwab	Designed to teach the research system of a discipline, but also expected to have effects in other domains
Cognitive Growth	Jean Piaget Irving Sigel Edmund Sullivan Lawrence Kohlberg	Designed to increase general intellectual development especially logical reasoning but can be applied to social and moral development
Advance Organiser Model	David Ausubel	Designed to increase efficiency of information processing capacities to absorb related bodies of knowledge
Memory	Harry Larayne Jerry Lucas	Designed to increase capacity to memorize

Table 2

Personal Models

Model	Major Theorist	Mission or Goals for which Intended
Non-directive Teaching	Carl Rogers	Emphasis on building the capacity for personal development in terms of self-awareness, understanding, autonomy and self-concept
Awareness Training	Fritz Perls	Increasing one's capacity for self-exploration and self-awareness
Synetics	William Gordon William Gordon	Personal development of creativity and creative problem-solving
Conceptual Systems Classroom Meeting	David Hunt William Glasser	Designed to increase personal complexity and flexibility Development of self-understanding and responsibility to one's self and one's social group

Table 3
Behavioural Models

Model	Major Theorist	Mission or Goals for which Intended
Contingency Management	B F. Skinner	Facts, concepts, skills
Self-control	B F Skinner	Social behaviour/skills
Relaxation	Rimm & Masters Wolpe	Personal goals (for example, reduction of stress, anxiety)
Stress Reduction	Rimm & Masters Wolpe	Substitution of relaxation for anxiety in social situations
Assertive Training	Wolpe, Lazarus, Salter	Direct, spontaneous expression of feelings in social situations
Desensitization	Wolpe	
Direct Training	Cage, Smith and Smith	Pattern of behaviour, skills

Table 4
Social Interaction Models

Model	Major Theorist	Mission or Goals for which Intended
Social Inquiry	Byron Massialao	Social problem-solving primarily through academic inquiry and logical reasoning
Laboratory Method	Benjamin Cox National Training Laboratory (NTL) Bethel, Maine	Development of interpersonal and group skills and personal awareness and flexibility
Jurisprudential	Donald Oliver James P. Shaves	Designed primarily to teach the Jurisprudential frame of reference as a way of thinking about and resolving social issues
Role Playing	Fannie Shafstel George Shafstel	Designed to induce students to inquire into personal and social values, with their own behaviour and values becoming the source of their inquiry
Social Simulation	Sarene Boocock Harold Guetzkow	Designed to help students experience various social processes and realities and to examine their reactions to them, also to acquire concepts and decision-making skills
Group Investigation	Herbert Thelen John Dewey	Development of skills for participation in the democratic social process through combined emphasis in interpersonal skills and academic inquiry skills

Families of models of Joyce and Weil (1980) are not mutually exclusive. One may find characteristics of one model apparent in some other models. Further, one may find that information processing models, besides focussing on the development of intellectual skills and the acquisition of content, are also concerned with the development of social relationships. Besides, some social interaction models emphasize also personal development of the individual.

Teaching strategies mentioned in the foregoing

pages are simply guides in the teaching-learning process. They need to be adapted by each teacher in the light of his/her teaching-learning situation and the learning styles of pupils. Further, these teaching strategies cannot be treated as theories of teaching. They may, as DeCecco (1968) suggests, be forerunner to probable theories. Since each strategy is designed to realize specific instructional objectives, it would be inappropriate to say that one strategy is superior to another. Once a teacher builds a repertoire of a few appropriate teaching

strategies, the mastery of them tends to produce an ability in him/her to adapt these strategies to suit the teaching-learning situations or to combine them with others

There is a need to incorporate a few teaching strategies in the teacher education programme at the secondary as well as the elementary level so as

to equip our prospective teachers to make use of these teaching strategies to improve upon the teaching-learning process in the classroom. Further, the need for training in-service elementary and secondary teachers through in-service courses in the use of these teaching strategies hardly needs any emphasis.

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Print Media as an Effective Teaching Tool

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TO understand the concept of educational journalism, a distinction has to be made between educational journalism and journalistic education. The former can be defined as any mass media (both print media and electronic media) that serve the purpose of educating the mass—the man in the street. By education we do not mean academic abilities alone, but non-formal and distance education which moulds an individual mentally, emotionally, intellectually, socially and religiously, evolving a totally integrated personality. So any mass media that help an individual grow in any one or all of these aspects can be termed 'educational journalism' for the simple reason that it educates the person. Even if it is just a two per cent education, it is education all the same. So it is not far-fetched to term educational journalism as an Open University! It is out there in the masses, available to the maximum in the minimum time, free of cost, the cheapest (in price) and the best!! So it is both an efficient and an effective medium.

Journalistic education is a training rendered to journalists on the subject and nuances of the trade. This distinction is related in the sense that unless the journalist is trained and educated in the field and dedicated to a certain extent to the cause of some kind of education in some form or other, his

journal will remain a bad medium of communication marring the Nations' growth and deteriorating its rich, cultural heritage. So a sound journalistic education will positively evolve into quality education through journalism.

The Journalist is consequently an educator as he speaks of man to men. The focus of all mass media is on MAN—his life, his environment, his progress, his culture and tradition. So educational journalism implies certain concepts:

- i) Awakening awareness
- ii) Interaction
- iii) Expression
- iv) Invoking concepts

One comprehends that educational journalism is basically communicative—meaningful communication. It is this that places educational journalism on a higher pedestal than mere education. All education is communicative but it may not be relevant or meaningful in certain contexts. The success of educational journalism lies in the fact that it challenges the learner with the questions: So what?, What of it? How are these subjects or concepts relevant to man's life here and now? What are its objectives at various levels of education? Because educational journalism deals with the current, the topical in everyday life reflected in the

media, the learner becomes aware of life in all its naked realities. Its vitality and strength lies in the fact that it reflects a TODAY. The learner is not shocked to encounter any unfamiliarity which he has not met in the classroom. Educational journalism has removed that block by applying print media as an effective teaching tool.

If the nineteenth century belonged to the era of the novelist, the twentieth century definitely belongs to the Journalist and the educational journalist will positively conquer the future. Every journalist, directly or indirectly, is basically an educator, instructing, informing and entertaining humanity at large. With him rests the social responsibility of not only shaping public opinion but also vitalising the human mind.

The print media has a tremendous potential as a teaching technology in classroom situations. It caters to pleasure while it instructs. The learner is refreshingly diverted and channelised (from the otherwise tedious lecture methodology). The print media, specifically photo journalism, its world of light and colour flashes on the mind, registering faster and in a more permanent style defeating the hit and miss lecture technique of imposing ideas.

Almost every subject under the sun can be taught through the print media—Languages, English Literature (be it Poetry, Drama or Feminist Literature), Science, Botany, Nursing and Medicine, Rehabilitation, Economics, Geography, Maths—name it and it is there in the print to be transposed into well-planned lessons for the classroom. A few examples have been cited on how to explore the media at various levels of classroom teaching.

At the Language level, newspapers can be used to teach the language skills of reading, listening, speaking, writing—where the student reads aloud any news item on feature that appeals to him/her, while the other learners listen. The class is then divided into small groups of four to five members, inclusive of both good and weak students, to procure interaction and exchange of ideas within the group. The learners can be given a skeleton of a lesson plan and based on their news item—be it Reporting, Sports, Film Reviews, Book Reviews, Accidents, Politics. The students can be asked to

prepare exercises like Glossary, Vocabulary building, Language items—syntax, tenses, grammar, fill in the blanks, match the following, comprehension questions on the chosen news item—Film Review or Picture-writing. The advantage of such an exercise facilitates in-depth comprehension.

The purpose of every education ultimately is to cater to student psychology to satisfy their needs. If the textbook system fails to do this, the tools have got to be checked and rechecked and changed from time to time, to suit the need of the day. Today the media is the moment! To exploit it, there should be a teacher's motto.

Such a technology can be further utilized at the graduate level where advertisements can be explored to teach the learner literary techniques in poetry. The choice of diction, alliteration, similes, metaphors and paradoxes can be dramatically taught through advertisements. The study of sounds and concepts like *faulology* can be mastered through these striking captions in advertisements. The students' interest and the thrill in the familiarity which these advertisements provide will promote speed in learning. Advertisers exploit description, narration, argumentation or exposition to sell their product. Within each of these are used figures of speech like puns, rhetorical devices, metonymy, climax, anticlimax, epigrams, hyperboles, etc.

Advertisements kindle memorizing calibre. For example:

ONIDA — Neighbours Envy Owners Pride
WILLS — Made for each other.

Alliteration is taught through advertisements like:

Fragrance for freshness — *Cinhol*
A Flair for Fun — *Flair Cigarettes*
Portmanteau Words: Butterlicious } *Amul*
Chocolicious }

Coinage of Words: Try the Eggstraordinary
National Egg — *Co-operation*

Faulology: 1. Dunlop is Dunlop
2. There are briefcases and briefcases — but a VIP is a VIP.

Proverbs, familiar phrases and symbols are also taught through advertisements.

"A Familiarity that breeds Progress" — BHEL

& Technology from Familiarity breeds contempt.

Adjectives abound in advertisements like

"Light, Comfortable, Economical, Long life, Flexible---" (Liberty sports shoes)

Rhyme Scheme

"Deep down care
for great looking hair"
(Vaseline)

"Say Hello the easiest way,
Coffee by Nescafe".

Personification: Where human qualities are attributed to inanimate objects. For example

MRF Tyres—"Tyres with Muscle"

Marblex—"The most hardworking floors around"

Assonance Eg.—"the easy, economical, efficient way".

Pun. Modi Continental—"Tyre that never tires"

Onomatopoeia: Gold Spot—"The Zing thing".

Metaphor. Northern Railways—"A shining star as the Northern horizon".

Audi thesis. Philips Bulb: "Some uncommon facts about the common bulb".

Poetry is not the only game that can be taught through advertisements. The print media, with its book reviews, film reviews, feature articles, etc. have served as very good material to be transposed into another game—Drama. Students bring the above content matter to the classroom and from the given Book or Film review or Feature Article, they transpose the Review or Article into either a One Act Play or Drama. They create their own setting, the climax, they design their own costumes for each character, they create and rewrite the whole book/film review into a Drama. Later they are given the opportunity to stage the play for other students.

At the post-graduate level where a paper on Feminist Literature exists, the students are requested to maintain a scrap book of cuttings from newspapers, journals, magazines based on Woman Exploitation, e.g. Dowry deaths, Rape, Suicides, Wife beating/burning incidents. These are brought to the classroom twice a week and are critically analysed and discussed against the objectives of the paper—(Feminist Literature) which is to bring

about equality and raise the status of woman in society. The causes and effects, the problems and possible solutions are explored, which each student either speaks about in the form of a seminar or writes an assignment on—keeping the characteristics and objective of Women's Literature in view.

Photo journalism, Advertisements in that either radiate or cater to women's upliftment or downfall in the form of posters, degrading woman also serve as good teaching aids for the Feminist movement.

The students are marked for these assignments, seminars and even at the examination level, essays are substituted for this system of examination which can be branched under open book examination. The learner is permitted to bring the Film Review, Advertisement or Scrap book to class and are encouraged to write short answers, essays, captions, slogans, write-ups, satires and poems (each according to their levels) in the classroom. Marks are accorded for the same.

The purpose and objective of such a teaching technology is to bring about social awareness in the student; to make classes more interesting and pleasurable and to impart information through entertainment, to relate classroom situation (teaching and learning) to the world outside. The student thereby is not shocked when he leaves school/college because he does not find anything in the world outside that he did not learn about in the classroom. He is prepared to face life as it is, now a known devil.

The print media is not only a useful teaching tool or literature but almost all subjects under the sun can be taught through print media. For example

1. *Nursing*: Cuttings on accidents, sickness, great people dying of heart attacks, etc. can be collected and the nursing students can be asked to plan out their diet, health and hygiene, first aid for each of the respective news item.
2. *Rehabilitation*: This department can explore those articles or features on the Deaf, Dumb, Retarded, Crippled and necessary steps and rehabilitation necessary to help each of these patients can be planned out.

3. *Economics*: Can be taught through features or articles on Population Explosion — how to limit it—its causes—its consequences. The students can be asked to comment on the mid day meal scheme, its economic value, etc.
4. *Commerce*: This department can plan out projects for small scale industry, loan scheme—News items or advertisements that relate to marketing, price rise, banking can be utilized as a teaching tool.
5. *Botany*: For the botanist, there exists in print media, useful articles and photos on gardening, plants. These could be experimented upon in small projects, green specialities—cheapest and the best. This could be explored.
6. *Religion and Ethics*: Religion and Ethics is an allied subject and this department can utilize any news report on the Godmen, their actual identity. Students can be asked to comment on their philosophy and explore topics like: Is man aspiring to reach God or Is man claiming to be God—The Religious feuds—the concept of conversion—can be very interesting matter for discussion and argumentation.

It must be understood that every innovator will be initially criticised. If Prometheus had not stolen fire from the Gods we would not have had our hearths warmed nor our food cooked. So it would be with teachers who are innovators in the educational field. The innovator will become an 'Outsider' initially to evolve, as time passes, as 'the Insider' promoting a new cause. But with Educational Journalism being not just efficient but an effective as a teaching tool, it will not and cannot substitute the Teacher. Mass media is limited in

the sense it is only a one-way channel, and unless it is followed up or combined with a correspondence course or some special arrangements in the classroom, it will be really impossible to evaluate how much knowledge has been acquired. The development of the critical faculty, analytical and logical argumentation and creative expression necessitates a close inter-play between the teacher and the taught. This is beyond the capacity of mass media, be it TV or Radio, however rich the UGC programmes may be—Does it really reach out to those in the mass? Are these periods provided in the time-tables of schools and colleges to listen in to these programmes? If not, what purpose do these lessons over AIR, TV serve?

No doubt these lessons could stimulate the teacher and can improve her performance in the classroom but the student requires guidance from the teacher regarding these. It is only a teaching aid, and can never become the teacher, because, all said and done, the human touch is an indispensable commodity!

But Journalism has transcended from being mere propaganda to a cause or community and has leaped into the Age of Science and Technology, exploring and exploiting all possible innovations, touching satellitic heights to expose Man to the Wonders of this world, through its educational faculty. Man is both entertained and educated simultaneously. The mind relaxes with knowledge. Educational Journalism seeks to break down barriers, caste, creed, and colour and reaches out to Man as a total body, with no distinction and functioning as The Great Leveller.

Teaching Paragraph Writing in English (L2) in Classes IX and X : Experience Approach

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THE experience of an individual is the sum total of what he sees, does, feels, hears, thinks, and so on. The perception of experience consists of two forms, works on three levels, operates in three dimensions, and depends on two factors.

Forms

In any given universe of situations an individual builds up his own field of reactions. These result in his experience. When the process of involvement in the reactions is conscious and intentional, the form of experience is *active*. When it is not so, the form of experience is *passive*.

Levels

Experience works on three levels. The perception of experience takes place on the memory level without any discrimination or generalization. On the understanding level the perception happens on the basis of certain generalized rationales. On the reflection level this is done through applying and

transferring the understood experience on to similar or even different situations. The degree of the experience-storage, of course, depends on the individual's ability to memorise, understand, and reflect.

Dimensions

As for the dimensions, experience may be primary, secondary, or tertiary. Primary experience is secured through personal physical contact. Secondary experience originates or is collected from other sources, for example, someone hearing about something from a friend. The root of tertiary experience lies in yet other source, for example, someone creating an image about an incident read in a book, which the writer narrates on the basis of what he has heard from his friend.

Factors

Motivation and interest are the factors for an experience of an individual. The perception of an

object or an incident depends, relatively, on the amount of motivation and degree of interest that are involved in the act of experiencing.

Another important aspect in experience is the experience storage. This depends on the traits, aptitude, and personality of the individual. The manner and moment of how and when he is situated within the field, become the decisive factors. The situational objectivity plus the amount and degree of motivation and interest would be equal to what and how much experience is perceived. In fact, the objective correlative composed of the individual and given situations, and the combined input of motivation and interest, are the factors for experience for any individual.

The Process

Perceived on such levels, in such dimensions, and by such factors as are explained above, human experience is stored in bits of information, within the limitation of individual memory. It is stored in terms of bits of information because "our storage systems are haphazard and inefficient" (Desse 1958, p.300). It is mechanical so far as the automatic and continuous intake is concerned — human perception is ever ready to experience. But it is not mechanical so far as the system is concerned — human perception is never ready to keep the experiences in any chronological order. That is why an incident occurring in the long past may be remembered while that of the very recent time may go to oblivion.

Experience is always due to the reaction of the

individual to the practical situations—direct or indirect. It is an operant behaviour "for which there are no readily observable external stimuli" (Ibid, p.12). That way it is independent. Recollecting the experience—reviewing the bits of the stored experience at any given point of time—is, on the other hand, specifically dependent. "We are dependent upon external cues and the situations of the moment for our ability to extract and act upon any piece of information in our memory" (Ibid, p.300).

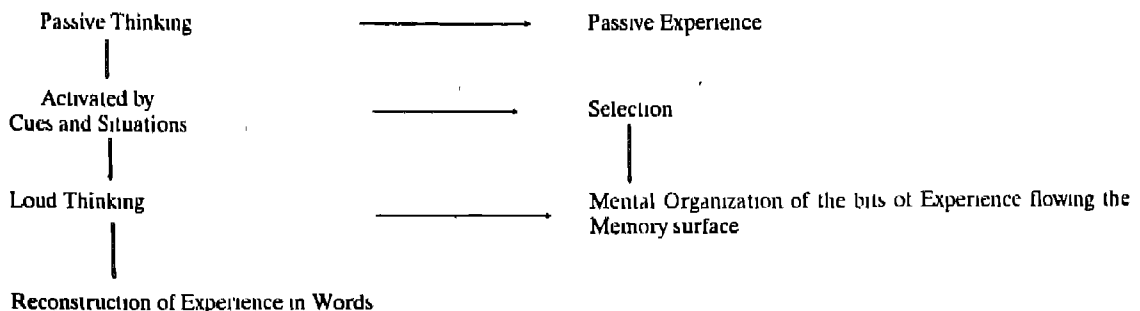
The external cues provide one with the means to think while the situations with the need to think. The revival of experience is due to thinking. And thinking, on its turn, is caused by these cues and situations. The relationship between experience and thinking is explained hereafter.

Thinking

Thinking is a continuous flow of activity which is either silent or loud. In both cases the flow moves along the contours of experience on the memory surface.

Silent thinking can hardly be predicted. Loud thinking which is transforming the thought-units into words spoken, is predictable because under specific cues and situations "certain artificial organizing patterns which affect the direction of flow can become established on the surface" (Bone 1981, p.220).

Loud thinking is reconstructing the personal experience orally. The function of the reconstruction is illustrated through the given paradigm:



Having been given cues and situations, an individual gets the process of thinking activated. This activated thinking leads him to the act of selecting bits of information that are stored within his experience. The selection, on its turn, waits on (i) availability — how much resources are available for the required context, and (ii) suitability — what and how much of the resources are objectively relevant to the required text. With these the individual organizes the bits of experiences mentally. This organization is the basis for loud thinking. The spoken words that reconstruct experience, may be described as loud thinking. Loud thinking for anyone is to "think about his experience in words" (Vernon 1971, p.36).

Reconstruction of Experience

In the process of transforming experience into words there are lapses and divergences. The real reconstruction in words can never be the prototype of the mental organization of the experience for two reasons: (i) psychologically, and individual is never capable of reproducing the same as he intends to, and (ii) linguistically, the ability to express experience in words depends not on the speaker's intention to communicate but on his competence to do that. Oral reconstruction of experience "yields a tentative ordering of a body of knowledge" (Bruner 1977, p.60)

Written reconstruction is more difficult and complex; for, it asks for the formalities of correctness, grammaticality, vocabulary, usage, and appropriateness that are usually uncared for in oral behaviour.

Reconstructing Experience in Written Words for a Second Language Learner

As regards reconstructing experience in words the second language learner is always at a disadvantage. He cannot think in the second language as he would in his mother tongue. Hence when he goes to rebuild his experience in English verbally, he cannot be automatic and natural as he would be

with his mother tongue. This makes written reconstruction more difficult for him. Developing such a skill is matter of competence for him, that may be acquired through practice. Practice in oral reconstruction would help a second language learner reconstruct experience in written words. The following foundations would explain how such practices are to be provided in order to make the pupils of Classes IX and X, reading English as a second language, able to write paragraphs in English on given topics on the basis of their experiences. Precisely, the following section explains the foundations of the Experience Approach concerned.

Pedagogical Foundation of Experience Approach

Till the end of Class VIII the pupils in the secondary schools learn how to write in English under certain controls. The controls are provided by (i) the readers, (ii) the language materials learnt from the readers, and (iii) the pattern practices the pupils are drilled in by the teacher. During this period learning how to reproduce correct sentences about given objects, things, and incidents is necessarily controlled. The major objective is to teach them just how to produce simple correct sentences on the basis of the models they have learnt. This period may be termed as the period of controlled writing.

In Classes IX and X the pupils are required to learn how to compose sentences on given topics independently. The pupils learn how to write compositions more freely when they go to Classes XI and XII. This is the higher secondary stage where they are to achieve the ability to write independently long essays—each one consisting of a few coherent paragraphs. This is a period that may be termed as the period of free writing.

The tenure of Classes IX and X stands in between the two stages—the controlled stage and the independent stage. This is the stage, in fact, where the pupils start learning how to write free compositions of a limited nature. They learn how to write coherent sentences on given topics in single paragraphs. Hence this period is very crucial. This

is transitional in the sense that this stage loosens the bond of control and leads the pupils towards free composition.

Learning how to write paragraphs in Classes IX and X should not be totally teacher-restricted as it is done at the lower secondary and middle secondary levels. Here the pupils learn how to apply and transfer the learnt materials on to parallel and new situations. They also learn the process of abstracting from experiences. This stage is not totally student-restricted too. They are not supposed to have been able to write paragraphs in long essays, independently, on given topics, which may be termed free composition. As such Classes IX and X are a stage of transformation—from controlled writing to free writing. It is neither entirely teacher-restricted nor entirely pupil-restricted. It is "a joint learner-teacher campaign" (Strevens 1977, p.19).

Theoretical Foundation of Experience Approach

Experience in experience approach refers to the sum total of various units of information that are acquired by an individual in various situations and are stored within his knowledge. The topics, that the pupils are asked to write paragraphs on, are usually about the bits of information that the pupils would have had already in their experience. The experience approach seeks to help the pupils reconstruct their own experience first in to words spoken, and then in to words written. In the initial stage their thinking has to be activated through cues and situations. Activated thinking would lead them to loud thinking. From there they would be led towards written communication.

In reconstructing the experience the cues and situations play the most important part. These are provided for the pupils who would write paragraphs on given topics by: (i) setting the topic of the paragraph, (ii) leading the discussion, discourses on the topic, (iii) making out a case for the relevance of the discussion and discourses to the topic set.

It has been noted that for the pupils learning English as the second language, while transforming the oral reconstruction of experience in writ-

ing, the difficulties lie with grammaticality, appropriateness, and correctness. Nevertheless, the greater difficulties lie in the facts that (i) they are not convinced that they have enough information to write about on a given topic—that the materials for writing paragraphs on the common topics can be collected and organized from within their individual personal experience, and (ii) most of them do not believe that if they want to write a paragraph on a given topic they are only to say things in writing.

The experience approach tends to give them the necessary conviction and confidence in this respect. They must be led to talking about their experience. Situations are to be built up where they can talk on given topics with optimum freedom and with least resistance. The need to talk is to be realized. This gives them situations that would make them think. The discussions and discourses would emit necessary cues for them to think. The processes of organization will follow. This organization will have its reflection in the written behaviour.

The objectives of the experience approach may be stated as follows:

- (i) To help the pupils think,
- (ii) To help the pupils talk about personal experience,
- (iii) To help the pupils organize the thought-units, orally, and
- (iv) To help the pupils say these thought-units in writing.

The theoretical foundation should also define the following:

- (i) The entry level behaviour of the target population, and
- (ii) The criterion behaviour of the target population.

By the end of Class VIII the pupils are supposed to have acquired the grammatical competence that is required to produce simple correct sentences in English. According to the syllabus concerned, they are kept within the area of controlled composition. Till the end of Class VIII they learn how to compose sentences on given topics on the basis of (a) the language works they have done following the exercises given in the prescribed books, (b) the

language materials they have learnt during the teaching of English at the middle secondary stage, i.e. from Class III to Class VIII, and (c) the patterns of composition they have been provided with by the prescribed books and the teachers. In Classes IX and X the pupils are supposed to learn free composition that expects them to write independently 10/15 simple correct coherent sentences on given topics. The process of learning how to do such compositions as are detailed above, is to start at Class IX and to be completed by the end of Class X. Therefore their ability to do controlled composition and the grammatical competence acquired by the end of Class VIII is considered the entry level behaviour. Their ability to write free composition by the end of Class X is taken to be the criterion behaviour.

The experience approach seeks to lead the pupils from controlled composition to free composition. That is why it should start operating from the beginning of Class IX.

Sociological Foundation of Experience Approach

The very core of the experience approach is to help the pupils take part in discussion and discourses. If they do not have the basic information to talk about, the approach does not work. As such in a class, while teaching paragraph writing, such common topics should be selected as can be tackled by all the pupils alike, in terms of information. This is a sort of control. But this control is necessary because this gives every pupil a sense of social security. On account of various reasons some pupils may not have acquired experience about certain things. This ignorance should not act as a barrier against their taking part in the discussions in the class where every individual pupil is to be activated and actively involved.

In the experience approach teaching and learning are highly interactive. The interaction takes place between pupil and pupil, and teacher and pupil. The specific role of the interaction is to maximize the speech behaviour. The teacher acts as a member of the group. The oral behaviour is initiated and continued informally. The teacher-role

is extremely democratic. The support system consists of (i) the experience of the pupils, and (ii) the assumed grammatical competence of theirs to produce simple correct sentences.

"Controlled and directed activity do not prepare students with autonomous expression" (Rivers 1969, p.25). That is why the experience approach discards controlled and directed teaching and advocates a teaching that brings in an atmosphere of learning where the learners are initiated, motivated, and led towards free composition. Oral reconstruction of experience is therefore treated as a free social behaviour being simulated inside the class which is a preparation for acquiring the ability to write free, i.e. to communicate through writing.

Psychological Foundation of Experience Approach

Learning how to write a paragraph is knowing how to use language freely. It is a system of "encoding and decoding" (Jarvis 1983, p.398).

Oral reconstruction is the encoding of pupils' own experience, and decoding is the write-up of the reconstruction on paper. The experience approach seems to help the pupils develop their own system of encoding and decoding. The ability to do so is the ability to communicate effectively in writing. This implies three things: (i) internalized knowledge, (ii) mental operations, and (iii) affect of the learner. The internalized knowledge has to be explored and exploited by the "editorial function" (Hadley 1983, p.9) of the learner. The teacher's role is to activate the editorial function that operates on the information floating on the surface memory. The glimpses and flashes of information are drawn out of the experience with reference to the mode of thinking. Separate modes are evoked by respective topics that may be selected to talk about and write about.

In order to utilize the experience for oral reconstruction, and then in written reproduction, the learner has to go through the following mental operations:

- (i) Exploring knowledge,

- (ii) Thinking in relative terms,
- (iii) Finding the appropriateness of the information with the given topic,
- (iv) Selecting the proper information,
- (v) Speaking them out in simple terms,
- (vi) Arranging them in order—putting them coherently so that while in discourses the informations are produced one after another in order,
- (vii) Editing the related information that becomes available on account of
 - (a) thinking initiated by the discourses of the other members of the group, and
 - (b) abstractions from the experiences that the other members of the group relate.

These (a) and (b) under the operation (vii) are the forms of secondary and tertiary experiences that are also used while a pupil goes to reconstruct his own.

In order to be able to compose orally and then in writing, the affect of the learner must be aroused. The arousal will help him

- (i) explore the body of information,
- (ii) think in relative terms,
- (iii) decide upon the appropriateness of the information on a given topic,
- (iv) select the proper information,
- (v) speak them out in simple terms,
- (vi) arrange the information in order,
- (vii) edit the experiences, and
- (viii) abstract from secondary and tertiary experiences.

All these would be tools for transforming "vague notions into full written expressions" (Schwartz 1980, p.1450a) that is required by learning how to write a paragraph. The "desire to find meaningful

names for experience" (Ibid, p.1450A) is the result of the affect-arousal, on behalf of the pupils, which is central to the task of learning how to communicate orally and then in writing.

Conclusion

In sum, the experience approach (in teaching how to write paragraphs on given topics, in English, in Classes IX and X where English is taught as a second language)

- (i) assumes the necessary linguistic background of the learner at the end of Class VIII, as the entry behaviour,
- (ii) takes off from the experience of the learner,
- (iii) moves through the process of organization of thought-units drawn from the experience of the learner,
- (iv) motivates the learner to reconstruct his experience through verbal intercourse, and finally
- (v) teaches the learner how to write a paragraph on a given topic.

The teaching strategy should

- (i) be exclusively a composition class where the main objective is to teach how to write paragraphs in English,
- (ii) help the pupils be able to encode their ideas orally and then decode them in writing in an organized manner,
- (iii) see that the teaching of grammar and correctness is not mixed up with the teaching of paragraph writing,
- (iv) make the threat of grammar and correctness reduced, and
- (v) ensure that verbal communication becomes the foundation for the oral reconstruction of pupil-experience.

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An Evaluation Proforma for Use in Oratorical Contests

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ORATORICAL talent is a human resource indispensable for leadership in democracy and in diplomacy. It must be spotted early, cultivated systematically and utilized properly. While spotting oratorical talent, potential care must be exercised to discriminate between bonafide talent and spurious demagoguery. A bonafide orator bases himself on sound knowledge, deep reflection and genuine conviction. He has at once a wide and lasting appeal. The late Dr. Radhakrishnan was a bonafide orator. Adolph Hitler was a dangerous demagogue whose speeches inflamed Germany to wage a war against the whole world. Spurious demagoguery will whip up mass hysteria by its melodrama and unscrupulously harness the consequent emotional upheavals to destructive purposes. It is effervescent in effect though damaging in its consequences. It appeals to prejudice and passion, not to knowledge and reason.

At the same time, knowledge and reason by themselves do not appeal to a large population, however discerning and educated it may be. That is why American Presidential candidates, even those who are innately charismatic, are said to enlist the services of media men, and willingly rehearse and execute with precision the gesture they prescribe in their election telecast.

Oratorical contests aim at spotting the talent potential in the younger generation. Evaluating the candidates in these contests is a delicate, difficult and even dangerous task in the context of the necessity for discriminating against demagoguery. Judges in most of these contests are eminent men and women who can intuitively tell the spurious from the genuine. Usually there is near unanimity in ranking the candidates among the panel of judges. But, sometimes there arises a tie between the top two candidates. On such occasions there are passionate and protracted discussions among the judges as to who deserves the first position. Eventually, inconclusive rounds of discussions give way to unsatisfactory compromises. The crux of the controversy as a rule happens to be around the general, that is, overall impression of the candidates rather than any specific content or criteria pertaining to their performance.

Such stalemates in oratorical contests can be avoided by using the proforma given below. The proforma specifies in advance the criteria on which the contestants are to be assessed. Thus it will sensitise the judges to performance related to these criteria in all the candidates and focus their attention on behaviour samples bearing on them, such criteria specific attention enable them to recall

analytically these discrete behaviour samples, make a comparative assessment between candidates on concrete evidence retained in and recalled from recent memory, and break any ties between them for the top position.

1. *The independent variability of the different criteria:* There must be differences in the marks that candidate obtains on the different criteria. If many a candidate gets exactly equal marks on all criteria, then they suffer

Evaluation Proforma for Oratorical Contests

No	Candidates' Name	Content 10		Reasoning 10	Expression 10		Style 10		Viva-Voce 10		Total
		Information	Diction	Generalisation (Induction) and Inferences (Deduction)	Voice Modulation	Gestures	Pose	Rapport (with audience)	Question 1	Question 2	
		5	5	10	5	5	5	5	5	5	50
1.											
2.											
3.											
4.											
5.											

Signature of the Judge

The guiding objective for the design of the proforma was to select, structure and explicitly focus on a compact set of criteria derived from three relevant sources: literature on rhetoric and oratory, research and development in performance evaluation, and field experience as judge in similar contests. "Halo Effect"—the unwitting carry-over of the weightage on the criterion to the rest was the parameter to be reckoned with. The constraints that were borne in mind while designing the proforma were the span of attention and the span of retention in performance evaluation.

The validity of this evaluation tool has been empirically confirmed on the following second order criteria:

from redundancy.

2. *The discriminative power of the criteria:* Since the cream of the contestants is filtered upwards for final competitions the differences among them—especially between those who eventually settle in adjacent ranks—will often be too small to detect by means of any one simple criterion. So, the criteria must severally and jointly help in recalling and reviewing their performance in the event of a discussion among the judges to resolve a tie between two contestants for the same rank.

An earlier proforma with focus on the person, the process and the product was found to be decidedly inadequate. Though the three criteria

were conceptually distinct, their structure/sequence did not control the "Halo Effect". Of course, the ultimate touchstones are the general concurrence of a sufficiently large audience with the rating and ranking on this proforma, and the contestants' future career as orators.

The proforma has five columns and the maximum of 50 marks per candidate are equally distributed among them. Thus ten marks are allotted for each major criteria.

The first column is content, content of the speech. The content of the speech can be best judged for its contribution to rhetoric force in terms of two subcriteria namely, information and diction. Information must be accurate and relevant diction connotes here both choice of words and syntax. Each sub-criterion is assigned five marks.

Reasoning is the way the contestant marshalls accurate and relevant information—found in the content of the speech—into a convincing argument in favour of the proposition he is canvassing. There are two directions in which reasoning can occur namely, induction (generalization) and deduction (inference). However, the use of either or both of them depends upon the initial—often unstated—assumptions of the orator. Hence the use of both modes in equal degree cannot be anticipated from every contestant. Therefore the ten marks assigned for this criterion are not explicitly distributed between the two modes. Nevertheless, a good rhetorical performance will involve a balanced and judicious use of both the modes as per the unstated assumptions and the factual content.

Expression is the third criterion. It has been analysed into two sub-criteria, namely voice modulation and gestures. Each of them is assigned a maximum of five marks. Whereas content and reasoning together constitute the cognitive dimension, expression pertains to the affective dimension. The success of an oration is a function of the smooth synthesis that an orator achieves between reason and feelings.

Some judges are of the opinion that a margin must be provided for assigning "intuitive" weightage to a "successful" orator since his performance does not readily lend itself to analytical approaches of assessment. This margin went under the rubric of General Impression. Nowadays it has been refined into style. Style can be further analysed into poise and rapport with the audience. Such an analytical approach even to a generic criterion like style minimizes the incidence of "Halo Effect", the unwitting carry-over of weightage from the one constituent sub-criterion to the other, each of which is severally relevant to the success of the oration, is independently variable, and thus can enable the judges to discriminate objectively between contestants who are otherwise equal. The ten marks are assigned equally between the two sub-criteria.

Finally, the fifth column, viva-voce, is there as a measure of abundant precaution against tutored and simulated spontaneity passing off as real originality. The idea of viva-voce, it must be acknowledged here, has been adopted from the "Talk Your Way to USA" contest organized by AIR India.

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Book Reviews

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**Learning Styles Among Creative Students, Subhash C. Agrawal,
Central Publishing House, Allahabad, 1987, pp.XVII + 1541, Price: Rs 100.00**

THE present publication is the result of a research study conducted by the author for the fulfilment of the Degree of Doctor of Philosophy in Education from the University of Meerut. Through this study the author has tried to compare the learning styles of high and low creative students at the +2 stage belonging to different schools.

The book is divided into six chapters. In the first chapter, the concept and types of learning styles and creativity have been explained in detail. The objectives and hypotheses have been carefully formed and stated in clear-cut terms. The main focus of the second chapter is on presenting an up-to-date review of related Indian and foreign studies. The third chapter presents the procedure of the study, the description of the tools, the selection of the sample and the statistical techniques used. For the measurement of creativity, the Baquer Mehdî test has been used. For the measurement of learning style preferences the author has made his own test which is one of the major contributions in the field of learning styles. The sample consisting of 400 students from various institutions of Meerut region seems to be adequate. The collection of data has been done in such a way

as to avoid usual pitfalls. Statistical techniques are also appropriate. In chapter four, the data have been put in suitable tables for ready interpretation and the hypotheses have been tested on the basis of the analysis. Chapter five details the conclusions drawn.

Being a properly planned study, the findings show that high creative students were found to have visual field independent, environment-oriented and flexible learning styles while as individualistic vs non-individualistic, short attention span vs long attention span, and motivation vs non-motivation created learning styles were common among both. So far as the effects of the types of school on learning styles are concerned, it was found that both public and central schools contributed equally to the development of the above-mentioned learning styles.

On the whole, it is a well-planned study and is beautifully reported too but at number of places one finds certain odd repetitions which call for further minor editing. The book will be a rich addition to the institutional and personal libraries of all those persons who want to do work in the emerging field of learning styles.

D.D. PANDEY

**New Directions in English Language and Literature
Teaching in India, S. C. Sood,
Ajanta Publications, Price . Rs 80.00**

ENGLISH in India has been a major concern of Educationists in the country. Many people have opposed its teaching on the ground that it reminded the people of their colonial past. They advocated regionalism in everything. But, some people argued that English education was essential for the progress of the country. They claimed that no regional language was in a position to cater to all the communicative needs of our people. English, they argued, opened a window to the outside world for our people.

The two opposing views have had their impact on the pattern of education in India. There emerged a major chunk of student population that got education in vernacular-medium schools and an elite group that used English as their first language. With the implementation of the 10+2+3 pattern, the situation became even worse as large numbers of students found themselves handicapped because of their lack of competence in English.

New Directions makes us aware of the effects of the system on the quality of education in India. It argues that the standard of English teaching has deteriorated and its accessibility to the disadvantaged has become almost impossible, though "the status, function and role of English have remained virtually the same as in the pre-Independence India" (Introduction: ix). English is still considered as a "passport" for better employment. This results in a growing demand for English education which cannot be met but by a few "elite schools that cater for those who can afford to pay exorbitant

fees and other expenses" (p. ix). A large number of students therefore enter Government schools and other non-prestigious colleges which are "ill-equipped, badly-managed and with very poor learning environments" (p. ix). They remain "devoid of this medium of communication which can enable them to compete with their fortunate brethren. Consequently, they fail to enter the 'inner circle' "(p. ix). Depriving these people of their proper education has resulted in their social and economic backwardness.

The book is divided into nine chapters and an appendix. They deal with varied topics from the role of English in India to the recent developments in ELT the world over. The first two chapters discuss why we need to teach English in India and justifies it on pedagogical rather than political grounds. This enables the author to identify the learners and their needs which have to be taken care of while designing an efficient language course. The author considers English as a second language in India which has a definite role to play in the life of our students.

An important issue that has been touched upon in the book (Chapter 2) is whether or not an ESP course would suit our purposes in the educational institutions. The author argues against any such course on the ground that it develops a 'restricted competence' in the students (p. 30). One can, however, argue that even the General English courses administered in the country at the moment fail to make the students competent in using the language for their communicative purposes. We

can make a case for ESP on the ground that it would prepare the students to handle English in their respective fields of work which they are likely to enter after exiting the educational institutions.

In the rest of the book the author discusses various current issues and practices in ELT the world over. From the theoretical issues concerning L1 (mother tongue) and L2 (Second/foreign language) to the practical classroom strategies, the author has drawn on several studies that have influences on the recent thinking in the field. Krashen's monitor theory, Munby's needs analysis profile, different syllabus situations, current teaching methodologies, etc. have been discussed thoroughly in order to make the reader aware of the shortcomings in our existing teaching. The book therefore covers more than a simple description of English education in India. It can be used as a manual which every student and teacher of English must consult to become proficient in the language.

Since much of our classroom teaching still depends on literary texts, the book offers an excellent overview of the recent thinking on the use of

literary texts for language teaching. Literary texts provide a ready-made material for the English teacher which he can exploit in order to make his students competent users of the language (p. 94). Teaching a literary text is not an easy task because it assumes many meanings and not any one meaning. A language teacher can therefore adopt an approach that enables the students to exploit the literary language to achieve their communicative ends. He can use it as a problem-solving activity which the student will be required to solve (a) independently, and (b) by working with his classmates. The urge to solve the problem makes him (or them) use the language more and more in order to get at the meaning of the text. The book contains several exercises that can be used in the classroom to sustain the interest and motivation of the students of both a literature and a language class.

The book contains an excellent bibliography which can help the reader explore the field further to satisfy his/her individual needs. Its price may be heavy on the students, but those who can go for it will never feel sorry for such a good bargain.

MOHAMMAD ASLAM

**The Sikh Gurus on Education, D. N. Khosla,
Adi Jugadi Books, Delhi 1988, pp. 118, Price : Rs.85.00**

On the Indian culture scene, the Sikh Gurus are known as religious leaders, but, for the first time, Dr. Khosla has established their entity as educationists. The emphasis is laid on comprehensive analysis of the concept of the ten Masters. While evolving the scheme, the author seems to be conscientious. The ventage point of the study is the quest for true education. He explores and explains the probabilities of education in the poetry

of the Gurus with documentary quotations from their creative compositions. The author concludes that the Gurus had not only obtained what the then formal education had to give but had, indeed, covered also a much larger ground. A comparative study of the then institutions of education in various social groups has been placed intelligently. The Gurus in the process of education were deeply engrossed in higher education and could

bring forward deep metaphysical meanings out of it. They believed in Truth via truthful conduct and 'opened new horizons in the pursuits of true education and excellence for the common man. The outstanding feature of this quest for excellence, however, is that man is capable of being God, his first step is to be humble, the low of the lowest. In Gurus' education humility is the central point of all values.

All philosophical search begins in the quest to know what is 'man' in man. In this regard the educational, spiritual, moral, social, physical and intellectual dimensions have been described and assessed at length very wisely. Not only this. The sinews of education have been taken into consideration and due stress has been laid to know what exactly is meant by the sinews of education. In this connection various disciplines have been brought forward, i.e. philosophy, humanities and social sciences, aesthetics, creative arts, crafts including vocations as subjects of study. While deriving conclusions, according to the Gurus, the sinews of education do not lie only in books but also in everything that man does in his daily life. To evolve divinity in man is essential, so that it permeates the whole of his conduct and helps him lead a righteous path in life and be "Ever dyed in the es-

sence of truth". The fundamental task of education is to evolve divinity in him and to inculcate a spirit that remains forever.

The pedagogy of education ought to be sound and adequate to help man obtain genuine realization of truth. Here, again, the author explores some methods which can help man procure the realization of truth, i.e. divine method of nature as the best method, psychological method, scientific and logical method and other methods and techniques of education like dialectic, self-study, narration, myth, singing and recitation, question-answer, dramatization, humour, etc. deem to be very important factors of the Gurus' educational strategy. But the focal advocacy throughout the creative process is to realize the ultimate truth.

Dr. D.N.Khosla must be applauded for such a unique attempt. He has unfolded a variety of layers of education from different angles. He has placed before us a canvass of multi-shades and multifarious strata. He has inspired the common man to give a serious thought to this heritage which is much more precious than the present milieu of education.

M.K.GILL

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TO OUR CONTRIBUTORS

JIE invites articles/papers on the impact of educational research on classroom practices and policy decisions. Specific examples where this impact is apparent may be given.

GENERAL EDITOR

Nehru and India's Language Policy

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A RIGHTEOUS democrat and a devout secularist, Jawaharlal Nehru was a nationalist in the finest and broadest sense of the term. He lived and symbolized the unity, integrity and sovereignty of the Indian people. His conscientious leadership coupled with his unadulterated political wisdom convincingly demonstrated to the rest of the political world that the Indian nation was not an apotheosis but a living reality, an eternal truth and an unfailing resilience. With the single exception of Mahatma Gandhi, there was no other public figure of the times who represented the inexhaustible vitality and cohesive plurality of this genuinely great country so eminently as Nehru did. He felt and thought what the Indian people felt and thought. He was the true voice of their feelings and the honest spokesman of their thoughts. He was their friend, philosopher and guide. It was just natural that he always remained the greatest darling of his people. He discovered their past, loved their present and assured their future.

System of Beliefs and Values

Nehru developed and spread a system of beliefs and values to preserve and strengthen the unity of India which we find so indispensable

even today. No right-thinking Indian will perhaps ever contest what a distinguished historian has recently described as the secret of the perennial appeal of Nehru's vision of India. "There is little doubt that the goals that Jawaharlal Nehru strove for are still our goals; the values he cherished are still our values; his vision of India-to-be still inspires us; and the legacy he left behind is in many respects a sheet-anchor for us who are today being buffeted in a sea of despair" (Chandra, 1988).

Nehru's views on the Government of India Policy towards the official language of the Union represent the genuine consensus of enlightened public opinion in the country. When we examine these views we are automatically reminded that we are a secular and democratic nation and that we, on our own, chose to place the unity, integrity and sovereignty of the nation above everything else. We gave the Constitution, which forms the basis of what we are today, to ourselves and we are bound by that Constitution. This is explicitly stated in the Preamble to the Constitution: "We, the people of India, do hereby accept, enact and give to ourselves this Constitution". We cannot therefore disown or shy away from anything that our chief spokesman

maintained throughout his spell-binding stewardship of our affairs as a testament of faith, unless we suddenly decided to embark upon a different form of polity and a different system of beliefs and values. We owe it to the Indian Constitution, to Gandhi and his holy associates, and, above all, to our centuries-old glorious national heritage to ensure that everyone in this country feels absolutely free and fearless in the conduct of life and expects a just and fair deal from all concerned, irrespective of his/her race, religion, region, sex or language. It is the birthright of every Indian to promote and strengthen his/her race, religion, region, sex and language. We all therefore have to develop and demonstrate the true spirit of a mutual regard for one another's point of view (cf. Sharma, 1987). We all have to guarantee that there is no mutual suspicion among us either as individuals or as communities. We will have to be fair, truthful and honest in our attitude to one another. We all have to sincerely believe and acknowledge that India and the Indian Constitution equally belong to each of us and that there can be no question of any one individual or community dictating terms to any other individual or community (cf. Sharma, 1987 a).

It is difficult to think of another country where there is such a great deal of heterogeneity in respect of religion, region or language. We have in India adherents of almost all religious systems of the world. Our geographical diversity is unique in the world. We speak perhaps the largest number of languages in the world. According to our census reports, 1652 mother-tongues are spoken in our country (cf. Ekbote, 1984: 234-35). Even when majority of them are dismissed as unclassified languages, there remain more than 200 classified languages and over 600 classified dialects (cf. P. B.).

Language Problem

Now, in a country where more than 200 languages are spoken as mother-tongues, it was only natural that to select one of them to be used as the national language without displeasing other language communities turned out to be an extremely difficult proposition for a democratic

government. The problem of religious heterogeneity could be got over by establishing a form of government called "Secular Republic" under which every religious group could carry on its rituals or strengthen its identity without jeopardising the rituals or identity of other religious groups. Similarly, the problem of regional diversity could be got over by establishing the federal system of government under which every region could participate in the process of national development with a sense of equality and without any fear of discrimination. But the problem of linguistic rivalries did not admit of such relatively neutral solutions. The makers of the Constitution could not remain neutral to the language question by keeping aloof from all languages or by giving each language an equal share in the functioning of the federal government. They knew as well as we do that no government, howsoever benign and impartial, could ever function without a language. They could no longer maintain the *status quo* in respect of the official language of the Union without hurting their national pride or compromising their sense of self-respect because the then official language was the language of the outgoing rulers. They could not choose one of the Indian languages and elevate it to the rank of the official language of the federal government without offending the sentiments of those whose languages had to be left out. The choice of the official language thus involved three parties. (i) the Union of India, (ii) the group whose language was going to acquire such special status, and (iii) those groups whose languages had to be assigned less historic roles and it was the triangularity of the situation that rendered the language question such a delicate and tricky affair. The makers of the Constitution were also aware that the decision about the official language was not going to be only a linguistic decision; it was going to involve a lot of history, geography, sociology, economics and politics. But, above all, the most crucial consequence of this momentous decision was going to be that while one language could operate at the national level, other languages would have to be content with operating at provincial, regional or local levels.

The makers of the Constitution were fully alive to all intricacies of the problem and yet they had to take a decision about the official language of the Union. They took a decision which is enshrined in Part XVII of the Constitution under the heading: "Official language".

Taken as a whole, the Constitutional provisions suggest:

- (a) that we have accepted the principle of bilingualism at the national level;
- (b) that any language, whether specified in the Eighth Schedule or not, can become an official language at some level, i.e. provincial, regional or local;
- (c) that Hindi as defined in the Constitution means the language which is derived principally from Sanskrit and written only in the Devanagari script; and
- (d) that the adoption of Hindi as the sole official language of the Union, between the union and the States, and between one state and another, wholly depends on People who do not speak Hindi as their mother-tongue.

Theoretical Misconceptions

Nehru's views on the language policy of the federal government deserve to be seen as the sanest as possible defence of the Constitutional position. But, before we examine Nehru's views on the subject, it is significant to clarify certain theoretical misconceptions about the language problem in India. There is no substance in the popular allegation, for example, that the indefinite continuance of English in India is based on the so-called elitist bias against Hindi or on the Centre's policy of appeasement to non-Hindi speaking states. When we encounter such allegations, we may do well to keep three things in mind. In the first place, we must remember that never before in the history of India the official language of the central government was a language spoken by any sizeable section of the country's population. Sanskrit, Persian or English was never the language of the masses. Each of them was an elitist language used by a

handful of people. Secondly, none of these languages was adopted as the official language of the country on the basis of any countrywide referendum. Each of these languages was imposed on the people by those who ran the government. Thirdly, and most importantly, each of these languages during the period of its ascendancy was a prestige language a knowledge of which ensured social status and financial security for all those who would care to acquire it. Looked at from this point of view, no modern Indian language, Hindi included, can yet claim to have the degree of *respectability* that Sanskrit, Persian and English enjoyed during their respective periods of political privilege.

Some people may feel that in settling the question of official language of the Union we could perhaps have gone the Russian way. In Russia, as in India, more than 200 mother-tongues, including 16 major ones, are spoken. But when we compare the linguistic situation in India with that in Russia we should also take into account the basic differences between the two situations: (a) unless we adopted the Russian system of polity we cannot go the Russian way, and (b) Russian is spoken by 60 per cent of the Soviet people as their mother-tongue while Hindi can claim less than 30 per cent of the Indian population as its native speakers (cf. Ekbote, 1984: 86).

We should not entertain the illusion that because the leaders of free India loved English, they retained it. Well-versed in English most of them certainly were but they loved India far more than they loved the English language. Some of these leaders wanted English to go even before the English could be asked to pack up. As early as in 1909 Gandhi wrote: "If this state of things continues for a long time, posterity will, it is my firm opinion, condemn and curse us" (Gopal, 1966: 180). Gandhi was sure that the medium of instruction ought to be only the mother-tongue of the pupil. In 1930 he wrote: "The medium of instruction should be altered at once and at any cost, the provincial languages being given their rightful place. I would prefer temporary chaos in

higher education to the criminal waste that is daily accumulating" (ibid, p. 185). He has pleaded in 1918 that only Hindi could replace English as a national language: "Unless we give Hindi its national status and the provincial languages their due place in the life of the people, all talk of Swaraj was useless. India must assert its real self if it was to regain its soul and thus truly become independent. It had lived too long 'under the spell of English' and as a result its people were 'steeped in ignorance'. Therefore, English must no longer be used in legislatures and on public platforms" (Elkote, 1984: 10). His argument against the continuance of English was based on a simple fact. "English", he warned his countrymen during the freedom movement, "could not become the language of the masses and no independent thinking was possible in any foreign language on a scale which a nation requires. Sooner or later, this problem is again going to burst on us because what the dominance of English language has done is not merely the cultural enslavement of India and degeneration of the intellectual elite, but a great divorce between the masses and the elite. The more the gap grows, the more is it likely one day to blow on our face" (ibid, pp. 89-90).

Nehru's Views

Nehru had similar reasons for replacing English by Indian languages. At an important meeting in Bangalore on 6 October 1955 he said: "I think it would be totally unbecoming for us in India to adopt as an official language a foreign language. I can tell you that many times it has been rather embarrassing for me as for others who go to foreign countries to have to talk in English to our own countrymen. People are surprised and ask whether we have no language of our own that we have to talk in a foreign language" (1983 b: 28). He went on to add that the language for this purpose had to be Hindi because from our national point of view or the point of view of self-respect it was "not desirable to carry on official work in a foreign language" (p. 28). He reiterated the same point in his historic speech during the Lok Sabha debate

on the Official Languages Bill, 1963. He observed, "I think English is a very fine language just as other languages are fine too Nevertheless I have been convinced for a long time that no real upsurge in India ... no awakening of the people could take place through the English language" (HT, 25 April 1963).

Two things seem to have determined the choice of Hindi as the national language: (i) that it was spoken as mother-tongue by the largest speech community in India, and (ii) that it was understood and spoken by a much larger number of people even outside its native region than any other Indian language. As Nehru put it while speaking on the States Reorganization Bill in the Lok Sabha on 30 July 1956: "All the fourteen languages mentioned in our Constitution are our national languages—not Hindi only. We have said that Hindi not because of *any linguistic superiority*, but because it is spread over a larger area and for other reasons, should be an all-India language; it should, for official purposes, become an all-India language gradually after a certain period" (1983 b: 203, *italics added*). He expressed identical views in his speech during the debate on the Official Languages Bill, 1963: "The makers of our Constitution were wise in laying down that all the 13 or 14 languages are our national languages, as much as any other. There is no question of one language being more a national language than any other ... Therefore it is our duty to encourage all these languages ... If we do not think of English as a link language for any length of time then inevitably we have to deal with Hindi, not because Hindi is superior to Bengali or Marathi or Tamil, but for the simple reason that Hindi is the most feasible language for the purpose (HT, 25 April 1963). That he did not use the term "national languages" to mean only those languages which are listed in the Eighth Schedule is evident from what he said in his speech in the Lok Sabha during a debate on an unofficial motion demanding inclusion of English in the Eighth Schedule on 7 August 1959. He rightly held that every Indian language was a national language in this sense whether it was mentioned in the Eighth Schedule or not. He said:

"The Eighth Schedule of the Constitution containing the list of 14 languages is certainly not an exhaustive schedule of Indian Languages ... The Eighth Schedule is a list of the more widely spread Indian Languages which are spoken by large numbers of people" (1983 c: 52 and 53).

We all know that language is a very powerful instrument of social, cultural or political integration but we do not, as often realize that it can at times become a menacingly divisive force. Unless we are constantly honest and careful, the question of language can suddenly turn into an excuse for explosive linguism which may threaten the very fabric of our socio-political organization. Linguism can sometimes take forms which would be uglier than the worst forms of sectarianism, parochialism or communalism. Linguistic agitations and counter agitation have often rocked certain parts of our country. The fact that even after four decades of independence we have not yet been able to develop a true feeling of linguistic nationalisms is itself evidence of how delicate and complex the language problem is in our country. Now, the question is: Why do some people prefer English to Hindi as a national language? If they really prefer English to Hindi, why did they not oppose the choice of Hindi as the national language in 1950 itself? When Hindi was made the official language of the Union by the Constituent Assembly there was not much of a public outcry in any part of India. As the years passed by people started having second thoughts about the Constitutional provision to make Hindi the sole official language of the Union with effect from 26 January 1965. There seems to be no reason to believe that learning Hindi could ever be more difficult than learning English for any Indian. English is as much a foreign language to a non-Hindi speaker as it is to a Hindi speaker. This means that opposition to Hindi must be based on reasons other than linguistic.

If we ponder this question with an open mind, we may hope to identify three important factors. The most important factor responsible for opposition to Hindi is the fear of imposition. It is very likely that speakers of other languages

apprehend that one fine morning Hindi will be formed of them by the native speakers of the language. The type of rigidity and over-enthusiasm that certain sections of the Hindi-speaking people have displayed from time to time certainly strengthens this apprehension. Now, in a democracy there can be no room for displaying hegemonic gestures by one group of people toward another group of people nor can there be allowance for imposing a decision on any part of the country's population by any other part through force or fraud. It must be left *entirely* to the speakers of languages other than Hindi to decide whether they want to have Hindi or English although it must also be noted that in a multilingual country like India it is almost impossible to avoid doing even a bit of injustice to speakers of languages other than Hindi, once Hindi is accepted as the only all-Indian language. Nehru puts it so aptly: "And wherever you may draw the line, you do justice to one group and injustice to another" (1983 b: 173). In another context he says: "Any decision that we might take about languages is likely to cause inconvenience to some, situated as we are in India" (ibid, p. 27). He advises all zealots, whether for or against a language, to see that in regard to language "there are intimate and passionate ideas in people's minds.... the person who feels passionately about a language must remember that the other men also feels passionately about it" (ibid, p. 74). Participating in the language debate in the Constituent Assembly he observed on 8 November 1949: "Language is and has been a vital factor in a individual's and a nation's life, and because it is vital, we have to give it every thought and consideration. Because it is vital, it is also an urgent matter; because it is vital, it is also a matter in which urgency may ill-serve our purpose.... if we proceed in an urgent matter to impose something, may be by a majority, on an unwilling minority in parts of the country or even in this House, we do not really succeed in what we have started to achieve ... the surest way of developing a natural, all-India language is not so much to pass resolutions and laws on the subject but to work to that end in other ways ... work to that end in cooperation and amity" (1983:

37). In his speech on the occasion of releasing the fifth volume of the Tamil Encyclopaedias in Madras on 6 January 1958, he reiterate more or less the same stand: "We should avoid rigidity in our approach to the question of language. We should proceed with a certain flexibility and with a very large measure of common consent. There can be no compulsion in a matter like this. We cannot compel large numbers of people to do something they do not like to do whatever our decision, it should be arrived at through general consent, and it should be flexible" (1983 c: 49). Replying to an opposition member in the Lok Sabha during a debate on the private motion seeking inclusion of English in the Eighth Schedule on 7 August 1959, he commented: "My approach to the language question is not the approach of those worthy colleagues of ours whom I would call Hindi enthusiasts nor is it the approach of the other colleagues who are the English enthusiasts. I am an enthusiast of both, Hindi and English" (p. 51). With a specific reference to the people in the South, he observed: "Hindi is at present objected to by many people in the South. Why? Because of a feeling of imposition and not because they are against Hindi ... Therefore all talk of imposition must go. I should go further and tell the people of the South that if they do not want to learn Hindi, let them not learn Hindi" (p. 54). During the famous debate on the report of the Committee of Parliament on Official Language on 4 September 1959, Nehru remarked: "I submit to this House, and more especially to our colleagues from the Hindi-speaking areas, that if there is one thing that is going to come in their way, it is their over-enthusiasm. The way they approach this subject often irritates others, as it irritates me" (p. 60).

The second important factor responsible for opposition to Hindi is more political than linguistic. Everyone knows, as Lal Bahadur Shastri pointed out in the Lok Sabha in his reply to the historic debate on the Official Languages Bill, 1963, that it is not practically possible to use all the Indian languages as official languages of the Union (HT, 26 April 1963). The country will have to choose between English and Hindi.

We will have to select either English or Hindi. We may, for the time being, insist on using both but a time will certainly come when we will realize the inherent illogicality of our insisting on retaining English as a parallel official language. One can go even further and pose a rhetorical question: If Hindi be not fit to be our national language, which Indian language is? Besides, it needs to be made absolutely clear that there is no justification for the notion in any part of the country, if there is one, that Hindi speakers cannot function in English as well as others can. The Hindi speaker's preference for Hindi to English to be used as an all-India language arises (or should arise) not from the fact that Hindi is his mother-tongue but from the fact that Hindi is an Indian language while English is a foreign language and that it is desirable to have an Indian language as an all-India language. But the Hindi speaker's preference cannot and must not be the preference of the speakers of other languages who constitute 70 per cent of the national population. Democracy is established, sustained and strengthened by the principle of general consensus among the people. We get the kind of government we deserve and we build the type of nation that we are capable of. Our national language has to be our conscious and mutually agreed selection. It cannot and must not be otherwise. But here we are mainly concerned with trying to guess why some of us prefer English to Hindi despite our awareness of the anomaly of our preference. It is very likely that opposition to Hindi or preference for the continuance of English arises from a vague fear in some of us that once Hindi becomes the sole official languages of the Union, speakers of other languages will be at a disadvantage in comparison to Hindi-speaking people and that, no matter how hard they try, their functional competence in the language will never compare with that of the native speakers of the language. Therefore, the only way they can hope to maintain their legitimate participation in national affairs, services and academic pursuits is to hold on to English which should, they believe, continue as an alternative to Hindi for an indefinite period.

Whatever be the merit of this claim, the Government of India considered it a justifiable demand. Once the Government of India made up its mind, necessary legislation to meet this demand had to be passed by Parliament. The passage of the Official Languages Bill, 1963, which was further amended in 1967, sought to accord a formal sanction by Parliament for the indefinite continuance of English as the *associate* Official Language of the Union.

The third important factor responsible for opposition to Hindi appears to be a psychological one. The principle of the Reorganization of States mainly on the basis of language was accepted by Parliament despite repeated protests by eminent people. Nehru himself stoutly opposed this approach. In a speech in the Lok Sabha on 7 July 1952, he said, "The idea of linguistic provinces will intensify provincial feelings and that, undoubtedly, will weaken the concept of a united India" (1983 a: 39). Apart from this, the creation of linguistic States could inevitably lead to difficulties for linguistic minorities almost everywhere. Nehru rightly anticipated the problems linguistic states could give rise to. "There are", he said in the Lok Sabha on 21 December 1955, "clearly marked linguistic regions, there are also bilingual and even trilingual areas between two such regions. And wherever you may draw your line, you do justice to one group and injustice to another" (1983 b: 173). Nonetheless, states were reorganized broadly on the basis of language in 1956 and after (cf. Ekbote, 1984: 52). These linguistic states gave rise to linguistic minorities who were required to be integrated linguistically into the provincial mainstream in order to be socially viable groups. Not many such groups could expect their mother-tongues to be recognized as the second or third language of the state at the provincial, regional or district level. They could certainly expect their children to be educated through the medium of the mother-tongue, at least, at the primary level but for almost all purposes they had to use the official language of the state. In other words, they had to make fresh linguistic alignments in order to play effective roles in the management of the various activities

and affairs of the state and this required a great deal of psychological adjustment. Since there was no way out, they made these alignments and adjustments and became part of the provincial mainstream.

The creation of linguistic states gave to the dominant linguistic community of the state a feeling of pride and autonomy it had never experienced before but it also stood in the way of the development of Hindi as the national language. Articles 343 (1) and 345 of the Constitution required speakers of a languages other than Hindi to use their mother-tongue at the state level and Hindi at the Union or inter-state level but once a regional language became the official language of the state, the speakers of that language found it difficult to switch over to Hindi at a higher level. The acceptance of Hindi at the Union level seemed, for some people, at least, to upset or militate against the feeling of pride and autonomy which characterized their use of the mother-tongue at the state level. To be able to function smoothly in two different languages at two different levels, it became necessary for the individual that he developed two levels of consciousness or two sets of perceptions. It is a fact of our daily experience that almost every psychologically successful individual is found to carry with him contradictory levels of consciousness or sets of perceptions—the same individual is father and son, leader and follower, master and servant, lover and hater, and so on—at different times, sometimes at the same time. These contradictory perceptions or roles should clash with each other but they do not, unless the individual is a split personality. As a matter of fact a peaceful coexistence of mutually exclusive perceptions or experiences within a single psychosomatic system requires the individual to make sacrifices or compromises at almost every step. For anyone who wishes to function in his mother-tongue at one level and in a different language at another, in this case Hindi, some such sacrifice, compromise, adjustment or integration becomes obligatory. This process of integration or adjustment is further complicated by the individual's awareness that only he, and

not the Hindi speaker, is required to make such sacrifices, compromises or adjustments. But this is what it is. The three-language formula is hardly any compensation, because we have Hindi on the one hand and other Indian languages on the other. Even though majority of Hindi speakers learnt one or two other Indian languages, this feeling of *natural discrimination* cannot be completely eradicated. That Hindi speakers still constitute the lowest percentage of bilinguals—only 5.1 per cent of them are bilinguals (cf. Prasad, 1979: 22)—is evidence of the linguistic structure of our country. In a situation like ours, we are called upon to acquire a definitive degree of perceptual clarity to avoid mutual ill-feeling or suspicion and to cohere as a national community. It is no wonder that, however unfortunate it may be, English still continues to be unifying factor in this wonderful country of ours. A country like India cannot afford to retain English as an associated official language at the expense of national self-respect for all time to come but till such time as we decided to switch over completely to Hindi, we will have to maintain bilingualism at the national level. It is of course true that in India English is not a foreign language in the sense in which French or German is—we need not any longer see English only as a symbol of our colonial past—but we should certainly know that even if we retained English for quite some time to come, we would not succeed in fully Indianizing it nor would we ever be able to completely separate its present linguistics from its past colonial politics. Our attitude to English, whether we are speaker of Hindi or of other Indian languages, is bound to remain ambivalent as long as the history of India remains intact.

Terminological Problems

By way of concluding this write-up we may briefly examine a couple of points related to the terminology of such academic discussions. Some sort of terminological complication is at times created by an unnecessary distinction between the so-called *Official* versus the *national* languages. People interested in this brand of politic distinctions contend that Hindi is *just* the official

language, and not *the* national language, of the Union of India and that all languages, whether specified in the Eighth Schedule or not, are *national* languages. It is of course true that Nehru often used the term 'national languages' to mean Indian languages. But here we should note that what our contemporary contenders are doing has nothing in common with what Nehru meant. He was too noble a scholar to indulge in academic gimmicks of this sort. Our contemporary contenders are trying to tell us that it is only for *official* purposes of the Union that Hindi is selected in preference to other Indian languages; otherwise there is no difference between Hindi and other Indian languages as far as linguistic *prestige* is concerned because all languages of India, including Hindi, are national languages in one and the same sense. Now, the question is: Why does anyone feel that "regional language" is a pejorative term or that "national language" is an honorific term? "National" and "regional", as parts of the Constitutional vocabulary to deal with the language question, are neutral technical terms and they must always be taken as such. When Nehru referred to 'Indian Languages' as 'national languages' he was obviously using the latter term in its ordinary, non-technical sense. In the technical sense, 'national language' means 'official language' of the Union and has to be contrasted with 'regional language'. "National language" and "regional language" denote different geographical areas of linguistic operation and therefore they are a fine pair. When we say that Hindi is the national language of India, we only mean that it is the official language, link language, inter-state language or formal *lingua franca* of India and, as such, it has to be distinguished from regional languages like Bengali, Marathi, Tamil, etc. which are used at the provincial level. No one should be apologetic about describing Hindi as *the* national language of India. Apologies create unnecessary suspicions and complications. No compatriot of Gandhi and Nehru should ever try to equivocate in contexts where academic honesty is the best policy.

The second terminological problem is related to the changing definitions of Hindi. Scholars, for

quite sometime, have been trying to define or redefine Hindi with a view to making it a language acceptable as the national language of India. The learned author of an excellent book on India's language problem has, for example, made an attempt to define Hindi once again with specific reference to its use in Article 351 of the Indian Constitution. After a good deal of linguistic and legalistic hairsplitting, he draws a line of demarcation between what he calls 'national' versus 'regional' Hindi. The crux of his argument is: "One can assert with no fear of contradiction that there are *two Hindi Languages* accepted by the Constitution. One is a *regional Hindi* whose operation is confined to the geographical limits of those states where Hindi is spoken and whose development is left to the states concerned. The other is the *national Hindi* whose development, enrichment and spread have to be ensured with the assistance of all Indian languages in particular and even foreign languages in general" (Ekbote, 1984: 29 cf. pp. 31-32). It should not be difficult for any discerning reader of this book to realise that the line of demarcation forcibly drawn by this author is too easily blurred because it does not in fact hold. His argument is not tenable, either linguistically or constitutionally. One does not have to be a constitutional expert or a dictionarist linguist or a combination of the two to understand what Hindi means in the constitutional context. There is no urgency, either constitutional or linguistic, to try to read more meanings than what the relevant provisions of the Constitution suggest. There is no justification, either, of separating the semantics of the term 'Hindi' as used in Articles 343 (1) and 351 from its semantics as used in the Eighth Schedule of the Constitution or of confusing Hindi with *Hindustani* as the latter is used in Article 351. There is only *one* Hindi and the Constitution consistently refers only to that Hindi. In the Constitutional context, as outside, Hindi is a language which is principally derived from Sanskrit, universally written in Devanagari, clearly distinct from Hindustani and fluently spoken as mother-tongue by approximately 30 per cent of the country's total population spread

over several states in North India. The original kinship between Hindi and its parent Sanskrit has not yet become a mere historical curiosity. Hindi is still heavily dependent upon Sanskrit for its increasing lexical expansion and the Indian Constitution explicitly supports this continuing allegiance of Hindi to Sanskrit. Article 351 directs that Hindi should continue to enrich its vocabulary, "wherever necessary or desirable", by drawing "primarily on Sanskrit and secondarily on other languages". The Constitution rightly separates Hindi from Hindustani by mentioning Hindi, and *not* Hindustani, in the Eighth Schedule as well as by laying down that it is the duty of the Union to secure the enrichment of Hindi "by assimilating, *without interfering with its genius*, forms, styles and expression used in Hindustani and in other languages of India" (Art. 351, *italics added*). Such definitional clarity is evidence of the fact that the Constitution does not consider it socially relevant or technically/linguistically correct to accept the traditional Congress definition of Hindi as Hindustani.

Hindi and Urdu have a common frontier which is only a frontier and not a territory. One might call that frontier "Hindustani", a pidginized amalgam of spoken Hindi and Urdu, but this need not and must not lead to the illusion that the frontier can be or is the territory, either the one or the other or both. A term coined by the Congress leadership, in fact by Gandhi himself, in the stormy era of the freedom movement and grabbed by some zealous linguists or pseudolinguists and scholars, Hindustani can, at best, refer to the historical overlap between Hindi and Urdu—two separate languages—spoken respectively by Hindus and Muslims. Hindustani has never been nor can perhaps ever be an independent linguistic entity, a viable instrument of educated and formal communication between individuals or institutions. Those who talk about Hindustani as a replacement for Hindi out of sympathy for the latter should know that what they are doing is just sympathy for the underprivileged no linguistics and that Hindi does not need such sympathy or patronage because it already has a healthy and

speakers make it and the native speakers of Hindi already know what Hindi is and what new forms, styles and expressions it should assimilate to continue and flourish. If any one wishes to learn Hindi, he/she should be welcome to do so but not one can be allowed to define Hindi afresh because it already has a thousand-years-long history of consistent growth and expansion, "Hindi imperialism", if there is any, is certainly anti-secularism, anti-democracy and anti-India and it cannot and should not be allowed to acquire any organized form. Similarly, "Hindi sympathy" or "Hindi patronage", if there be any, would obviously be anti-reality, anti-linguistics and anti-Hindi and it cannot and should not be allowed to acquire any academic respectability.

Justice Ekbote (ret'd), the author of *A National Without a National Language*, perhaps does not quite realize that his "national Hindi", whether he likes it or not, ultimately turns out to be as vacuous a linguistic concept as Grierson's "Behari Language" or Suniti Babu's "Bazar Hindi" (cf. Sharma and Jayaraman, 1985). Grierson fails to see, despite his pompous claims to an infallible understanding of Indian languages, that what he identifies as "the Behari language" is not an independent linguistic entity by any stretch of imagination. Likewise, Suniti Babu fails to see, despite the heavy baggage of linguistics on his back, that he calls 'Bazar Hindi' is not a language but only a pidgin and that a pidgin cannot and should not become the educated *lingua franca* of a country like India.

It may not be altogether wrong to attribute the origin of the concept of Hindustani to Gandhi but what is interesting here is to note that he himself does not seem to have been very clear in his mind about that he meant by this term. To substantiate this conclusion we may look at the following extracts from his Writings "Hindustani should be neither Sanskritized Hindi nor Persianized Urdu, but a happy combination of both. Our national language must develop into a rich and powerful instrument capable of expressing the whole gamut of human thoughts and feelings. To confine oneself exclusively to Hindi or Urdu would be a crime against intelligence

and the spirit of patriotism" (cited in Ekbote, 1984 : 12).

Again,

"Hindi is that language which is spoken in the north by both Hindus and Muslims and which is written either in the Nagari or the Persian script. This Hindi is neither too Sanskritized ... nor too Persianized... The distinction made between Hindus and Muslims is unreal. The same unreality is found in the distinction between Hindi and Urdu. It is unnecessary for Hindus to reject Persian words and for Muslims to reject Sanskrit words from their speech. There is no doubt or difficulty in regard to script. As things are, Muslims will patronize the Arabic script while Hindus will mostly use the Nagari script. Both scripts will therefore have to be accorded their due place".

Again,

"A variety of scripts is an obstacle in more ways than one ... A common script for all those who speak the Indo-Sanskrit languages, including the southern stock, is a practical ideal, if we but shed our provincialisms as the latter is good to the extent that it serves the still larger end of the universe ... that the Devanagari script should be the common script, I suppose, does not need any demonstration—the deciding factor being that it is the script known to the largest part of India".

And finally,

"If we are to have a common language for cultured India, we must arrest the growth of any process of disintegration or multiplication of languages and scripts" (all quoted in Gopal, 1966: 196, 184 and 185).

It was at Gandhi's instance that the Indian National Congress whose proceedings used to be conducted only in English decided in 1925. "The proceedings of the Congress shall be conducted as far as possible in Hindustani" (ibid, p. 187) Thus, after 1925 Hindustani became a technical term in the Congress vocabulary to talk about the

national language. There was nothing unusual about Nehru, one of the most eloquent spokesman of the Indian National Congress, repeating Gandhi's idiom and ambivalence in his references to Hindustani. A few extracts from Nehru's writings should be enough to support what is meant here. Nehru wrote in 1935 "I am absolutely certain that Hindi or Hindustani should be our national language and it will be so, even though there are two scripts" (1974: 444). In 1937 he wrote, "Hindustani (both scripts) will be recognized as the all-India language" (1976: 843). Inaugurating the Hindi Bhavan at Santiniketan on 31 January 1939, he said: "Urdu and Hindi are like the two streams flowing from the parent source; their framework and structure are the very same. Provided we do not attempt to widen the breach, we will—whether we call our language Urdu or Hindu—be laying the foundation of a common language namely, Hindustani" (1976 a: 607). Similarly in a speech at Aligarh on 9 January 1940, he announced. "In my view Hindustani is the only language that can be treated as a national language for the whole of India. The question of script can be solved later" (1977: 287). Reading Nehru's formulation on Hindustani we may remind ourselves that it was not for nothing that in 1940 itself Gandhi declared

Nehru to be his political successor because Nehru, in his view, was the person who "when I am gone ... will speak my language" (Chandra, 1988).

If we critically examine what Gandhi and Nehru wrote about Hindustani, we should not find it too mystifying to account for why they said what they said, working in an atmosphere of increasing mutual suspicion and fear between Hindus and Muslims, they were simply trying their best to ensure the attainment of India's freedom without India's partition and, to achieve their highest patriotic goals, they had to do something in all earnestness to bridge the widening gulf between the two communities and Hindustani was the logical result. Much as it is that Hindustani owes its genesis to the noblest version of patriotism as embodied in the greatest Indian after the Buddha but that does not by itself assure its viability as a full-fledged linguistic system so that it may serve the official purposes of the Union of India. We should therefore have to have the necessary degree of moral courage and intellectual honesty to stand up and declare that, in spite of Gandhi and Nehru, Hindustani can not be accepted as the National language of India.

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Value Crisis

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THE world today does not present a very bright picture. There is mutual suspicion and distrust among the nations which is leading them on the suicidal path of nuclear armament. Certainly, it is a great tragedy that just at the moment when the world has, as its disposal, all the resources which can give material prosperity and happiness to the whole of mankind, we should be frittering away our energies in mutual recrimination and hatred. The present situation, indeed, in the world of human affairs is all so profoundly disturbed. Momentous changes have taken place in all fields of life and activity. We have produced highly qualified teachers, talented scientists, expert medical men and efficient engineers and others. But what is the difference education has made to the quality of man? Are the educated better men and women than the uneducated? Are they more selfless and less selfish—more generous and less greedy—more humane and less brutal; more merciful and less revengeful; more graceful and less crude; more cooperative and less competitive, and so on. We dare not answer these questions to ourselves, for we have no courage, at present, to stand before the mirror. We are fast developing an attitude where most of the time and effort of man is utilized in

earning or collecting means of livelihood. Progress is measured not in terms of quality of life but standard of material position. And if material good is the objective there is no place for service to the other man. This has been brought out by Shri Jai Parkash Narain very clearly when he says, if a man and his consciousness and the society and culture which he has built up are manifestations of matter—howsoever dialectically active—why should anyone in such a society try to be good, generous, kind, unselfish? Why should we have sympathy for those who are weak, poor or sick? So what incentives can there be for moral behaviour? Consequently it is becoming more and more difficult for a person to be selfless or generous or kind or to have sympathy for the weak, the poor or the sick.

World of the Wild

Certainly, civilization is perhaps ^{one of} one of its great turning points. There will be few today who will dare to assert that we live in an age of sanity, decency, enlightenment, love, fellow-feeling, etc. In every field of human activity—political, economic, social and religious—man is confronted with a challenging situation. He finds himself helpless—perhaps not equipped fully to exercise his control

over all that seems to happen under his very eyes. He can see the great changes taking place, he can feel the wheel of injustice moving ever on, he can realise that loyalties are at cross roads yet he humbly submits and gladly accepts whatever falls to his share. To quote Dr Radhakrishnan, the present state of the world is, to the thinking men, a source of pride, bewilderment and alarm. One may ask what is the matter of pride about the world we live—the great achievements of science and technology which enable us to dominate the skies, reach out to the stars and expand to the ends of the world. Our civilization is unique in that it offers us the basis of a world-wide social order. World wide! To be true, it has given us the world of the wild where the brutes brawl all over for whom love has no meaning, beauty no significance, goodness no place, sentiment no sense, emotions no value, friendship no recognition, faith no foundation, relations no existence and commitments no honour. The wolves around have badly pounced upon those tender human values which made men love each other, which made him worth somebody's trust, which made him cherish life as God's most precious gift which he jealously guarded against all evil thoughts and actions because he rightly believed that what he is, is God's gift to him and what he makes of himself will be his gift to God and by cherishing the values of love, fellow-feeling, honesty, brotherhood, nobility, etc. he certainly enriched and brightened God's gift thus proving himself true to His faith. But faith in man today is almost a rare phenomenon both at the individual and national levels. What a satire on human character when someone says 'the more I see the man the more I love the dog' or 'it is very easy to die for a friend but very difficult to find the one for whom to die'. Oh God! what a value bankruptcy all the world over. One can't find even a single person worth one's love nay trust since it is more important to be trusted than to be loved. And it is this feeling of distrust all over that is turning man against man. What a tragedy! A myriad of men are born; they labour and sweat and struggle for bread, they squabble and scold and fight; they scramble for little mean

advantages over each other. Age creeps upon them; infirmities follow shame and humiliations bring down their prides and their vanities. Those they love are taken from them and the joy of life is turned to aching grief. The burden of pain, care, misery grows heavier year by year. At length ambition is dead, pride is dead, unity is dead, longing for release is in their place. It comes at last—the only unpoisoned gift earth ever had for them and they vanish from a world where they were of no consequence, where they achieved nothing, where they were a mistake and a failure and a foolishness, where they have left no sign that they have existed, a world which will lament them for a day and forget them forever. Something written by Wordsworth long time back, really depicts so true the modern man—The World is too much with us, getting and spending we lay waste our powers. But then how does it profit a man even if he gets the whole world to his ownself and loses his own soul.

Jaded Emotional State

The industrialised nations have certainly become affluent but at what cost. Perhaps the most insidious by-product of current industrialism is the jaded emotional state, seldom consciously recognised that results from industrial monotony and denial of personal initiative. The fatigue-poisoned mind and body too dull to enjoy quiet beauty and true thought, crave the crude excitements so amused among us, restless speeding in motor cars from nowhere to nowhere; rapid movements and trivial but exciting physical dangers of the amusement park, superlatives and exaggeration in talk, artificial stimulants and feverish pumped up gaiety of the wild, party, the thrills so insistently demanded by the younger generation, violent plastic arts using harsh angles and garish colours, noisy mechanical over-accented music. The jazz age, in a word, is jaded and joyless age incapable of the happy serenity, of creative leisure and supreme bliss of eternal values in the form of truth, beauty and goodness. To quote Prof Ludwig von Bertalanffy, Americans is the affluent society, so we read and we have the highest standard of living ever achieved—but what is

perhaps the most remarkable symptom; economic opulence goes hand in hand with a peak of mental illness; some 50 per cent of hospital beds are being occupied by mental patients. It goes hand in hand with a continuous increase in the rate of crime especially juvenile delinquency. And psychotherapists tell us, besides the classical neurosis caused by stress, tension and psychological trauma, a new type of mental sickness has developed for which they have even had to coin a new term—existential neurosis, mental illness arising from the meaninglessness of life, the lack of goals and hopes in a mechanical mass society. The diagnosis of the sickness is that it provides more or less abundantly for biological needs but starves the spiritual ones.

Bewildered Man

The present world is also a source of bewilderment, we are bewildered that our efforts to establish a world order on principles of equity and freedom, through international organisations, have not been successful. Though we know it, we do not feel it in our bones. Even today the devil in man is out to destroy the future dream of mankind—the dream of building a new social order based on happy life and cooperative living. It is well said that there is no evil in atom, only in man's soul. It is this evil that bewilders a socially conscious man. It is this evil that looms large on the horizon of humanity. When we find that great nations are not ready to change their ways of dealing with others and persist in ways which are outmoded and dangerous we are not only bewildered but alarmed also. The fact remains that the world has been brought together rather too suddenly. The intimacy has been forced upon nations. To quote Pt. Jawaharlal Nehru, we are faced with a crisis in human affairs where either humanity survives or not. And this crisis can only be resolved finally not by some nuclear tests being stopped, but by something deeper, by the minds of men and the hearts of men and the spirits of men rising to somewhat higher levels. I believe that humanity will rise. It is my faith, because there is no other way, otherwise it might perish.

Quest for Value-oriented Education

It is against such a devastating dance of devilish forces that man's quest for value-oriented education is not a mere sentimental urge but rather a pressing need. But then values change from time to time, place to place and what values of tomorrow can be ought to be none can say. And yet man all over the world does talk of values. After all why? Is it that there is an inborn resistance to change? Is it that the spirit of man is ever on the look out to find out all that is the best either in his past or present which he is out to look got and assimilate? Is it that he is not satisfied with just change, he wants to grow-grow into manhood? Is it this inner call that makes him look back to God as his sole survivor? The mind of the man, indeed, is a complex and intricate piece of mechanism, still it is capable of infinite adaptation. Great human achievements, amazing scientific discoveries and also cruel and horrible deeds are all conceived of and emanate from the human mind, therefore, the mind is to be so cultivated as to remove from it all that is undesirable, inhuman, ignoble, etc. and impregnate it with eternal ideals of truth, beauty and goodness leading to universal peace, progress and prosperity. Certainly unless it is made a better world, a fairer world, millions will continue to go to their graves silent, saddened and embittered and what we need for the purpose is a complete reorientation of education. If we are to aim at the development of integrated personalities materialism will have to be counter-balanced by spiritualism, rationalism of faith and automation by creativity. Indeed, when the scope of education is widened and intensified and it is looked upon as a life-long transformation of human nature, it would bring about a fresh release of spiritual energy and abundance of love and fellowship. It is, no doubt, a long process but then this is the only hope for human life and survival. And being concerned with all naturally it requires the efforts of all—the young and the old, the far and the near, the advanced and the backward—to make the dream come true and this needs re-education of the entire human race with a view to initiating it into those

ways of living and thinking as will ensure the development of a society based on all humane qualities inhabited by people dedicated to the welfare of one and all.

Modern man lives in an interdependent world. He must learn new skills and techniques and also introduce such changes in the ways of living and cultivate those habits, attitudes and social behaviour which would enable him to discharge his new responsibilities as a world citizen in a dignified manner that would lend grace to his life. Since nations of the world are at different stages of development it is natural that the purposes and organisation of education would assume varied forms. Education for humanity, however, must be the central theme in all systems of education. It should aim at combating ignorance and prejudice, fanaticism and bigotry which divide races and nations and make man the enemy of man. It should make people tolerant of differences in the ways of living and thinking and also teach them that the only rational method of resolving differences is through persuasion and not force and the only life to be lived is the one which is morally uplifted, religiously alert, spiritually enriched, intellectually expanded, mentally balanced, physically fit and socially adjusted. As such education should guide the energies of the people into healthy creative channels and stimulate their intellectual, aesthetic, moral, religious and spiritual interests so that they may not only elevate the individual but may also enrich and flourish the life of the community. To quote, G. Eloit, we can only have the highest happiness such as goes with being a great man, by having wide thoughts and much feeling for the rest of the world as well as ourselves; and this sort of happiness often brings so much pain with it that we can only tell it from pain by its being what we should choose before everything else, because our souls see it is good. And it is only by

creating the attitude of 'good' and by developing free, enlightened and broad-minded individuals that we can save humanity from impending disaster. Indeed, the edifice of our future entirely depends for its beauty, dignity, utility and stability on the foundations we lay today in the form of the education and training our youth receive.

Whatever may be the nature of education used for promoting value-oriented trends in the young ones, the fact remains that the present situation of the world throws a tremendous responsibility on the teachers also as values are more a matter of being caught than taught. So what we need for the purpose are the dedicated teachers who would stimulate right thinking among the people, give them a vision of true greatness and inspire faith to dedicate themselves for the realisation of great ideals. The cause of truthful living, honest thinking and noble doing is enhanced and enriched to the extent the individual behaves in a conscious, purposeful and creative manner. The alternative to value-oriented living is total annihilation on all sides which no sane man on earth would advocate. The pressing need of the hour, therefore, is to produce man of good character, of real intellectual calibre, really enlightened and cultivated men, possessed of sound knowledge and solid thoughts—men in whom intellectual tastes and habits of high moral order have been duly balanced. Thus what we need is the general body of enlightened intelligentsia, independent writers, wise people, alert teachers, responsible youth, awakened scholars, creative artists and conscientious scientists to work towards value development on a world basis which alone is and must be the only hope of value-torn world of today to enable man to have smooth sailing where life would be all free of splitting strains, shattering storms, stangling sobs, piercing pricks and killing conflicts.

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Maintaining Classroom Discipline in a Permissive Society

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ONE of the most pressing problems the class teacher faces is that which has been called discipline. Although the term discipline has different connotations, it has traditionally been used to imply externally imposed regulations outside the process of learning. Some people feel that it means keeping order in a group, while others interpret it as a technique of maintaining order. To still others, discipline means punishment. Discipline should be seen as a means of helping the child gain inner controls on doing what is approved and acting in approved ways.

Discipline Problems

Discipline problems can best be understood and resolved when they are considered within the context of the goal and process of education as a whole. This paper will examine some of the discipline problems in the American public school (middle and high) system and why indiscipline has been on the rise throughout the country, especially in the urban areas. It will briefly discuss moral education and values as these relate to discipline.

When questions regarding difficult children are placed within the broader framework of the

teaching-learning process, they can be rephrased so as to lend a more positive and pervasive solution to the immediate situation. Classroom management has always been one of the foremost problems confronting the practising teacher. This becomes increasingly evident when one questions a number of elementary, middle and high school teachers in the urban areas of the USA. Teachers agree that adequate control of a class is a prerequisite of achieving instructional objectives and to safe-guarding the physical and psychological well-being of the children.

In a seminar/workshop organized by the Ojo School Management Committee of Lagos, Lagos State, Nigeria in 1986, the problems of discipline in the Nigerian schools were discussed. Practising teachers discussed the most effective means of exercising control in the classroom. A retired school principal described the gradual withdrawal of power, in respect to discipline, by the Lagos State Government Agency. This was seen as one of the major causes of indiscipline in Lagos State Schools. This gradual withdrawal of power was echoed by most teachers and administrators in the public school system of the USA. It is a well-known fact that many beginning school teachers, whether male or female, are concerned about

matters of classroom discipline.

Moreover, school administrators and principals regard the maintenance of discipline as the greatest problem of inexperienced teachers. It should be stated, however, that this problem is by no means limited to the inexperienced teacher. Even seasoned teachers experience many of the same problems. Practical information on discipline will serve in helping the beginning and the experienced teachers alike. Because of the mounting problems of indiscipline and the total relaxation of disciplinary actions against students in the schools of Nigeria, corporal punishment was re-introduced into the schools during the 1985/86 academic year. Similar corporal punishment actions have been passed into law in at least forty-two states in the USA. Paddling is one such action which is now allowable in many of the states of the USA.

Discipline in the classroom should be regarded as imposed. It structures the educational process on behalf of society. It should be noted that society, through its educational and professional experts, seeks to educate its children and citizens, and just as self-discipline helps the individual to reach his goals, so classroom discipline would be that characteristic of the classroom process that permits the goals of the educational programme to be achieved most efficiently.

The relationship between classroom discipline and student self-discipline can be viewed as the vehicle by which two prime goals should be accomplished, namely the immediate learning objectives that society sets for its young, and the long-term goals which society sets for the personal development of children and youth beyond the formal schooling process. In the Milwaukee Public Schools system (Milwaukee, Wisconsin, USA) behavioural expectations for student conduct are arranged in five categories as follows:

1. Attendance and punctuality;
2. Appropriate learning environment;
3. Protection of physical safety and mental well-being;
4. Protection of property; and

5. Usage of controlled substances.

These behavioural expectations apply when the student is present in or around the school property; at any school-sponsored activity, regardless of its location; and travelling to and from school or school-sponsored activities, including public bus transportation.

There is some student conduct which violates behavioural expectations and demands immediate administrative action. These are defined as minimum to maximum actions which can be taken by an administrator, ranging from 1 to 5. Level 1 requires a conference with the parent or guardian of the student, primarily for misconduct that takes place within the classroom with no other student involved. Level 2 disciplinary action requires reporting to the school psychologist or social worker or school counsellor for short-term intervention strategies. This strategy is primarily used for students who continue to violate rather minor school rules of conduct. Level 3 is formal suspension from all school activities for a period of one to three days. Level 4 is referral to the central office administration requesting a formal transfer of the student from one school to another. This level of action is taken only when all other avenues within the school have failed and the student continues to misbehave or the student has brought weapons or drugs into the school or the student has been involved in a serious fight with another student(s). The last level, Level 5, is reserved for severe cases of disciplinary action which require action by the School Board to remove the student from the Milwaukee Public Schools system after an expulsion hearing. Administrators are required to use minimum disciplinary action levels for first-time or minor offences. The maximum discipline action levels should be used only in those cases where misbehaviour is repetitious. Administrators reserve the right to deviate from these disciplinary actions when the conduct is considered seriously disruptive to the school environment. However, observations in the Milwaukee Public Schools has shown that these actions do not seem to have a serious impact on the student who is a repeater. For students

involved in minor violations of school rules, these actions seem to curtail repetition. Or for the student is usually a good student, but gets involved in a one-time-only situation, these actions have effect. For students who have continuously misbehaved for years in the classroom, this student knows that these levels of discipline mean little to him/her and he/she continues to violate school rules. Continued suspensions from school activities, with required parent conferences upon re-instatement, is the most adequate means of control implemented at this time in the Milwaukee Public Schools.

Moral Education and Discipline

Moral education is essentially a matter of educating the feelings and emotions. It is the training of the heart and consists of developing the right feelings and emotions (affective development) according to society's views. It does not involve any cognitive abilities that can be trained. It is essentially a matter of creating the right atmosphere, learning and imitating by example, modelling oneself after an ideal. Morality is not a thing that radiates from one person to another. Moral development includes both moral thinking and acting. Moral thinking is characterized by the exercise of rational choices. A moral person is not only a person who does the "right" thing but also one who does the "right" thing for the "right" reasons. How does morality relate to values?

Moral Education and Values

Depending on the position held with respect to the nature and scope of moral education, several views with regard to the role of the school in this sphere have emerged. These views range from a total scepticism about the role of the school in morally educating the young to highly optimistic views that the school is the major source of moral education. Of the myriad of views relating to the role of the school in moral education, the following should be highlighted:

- (a) Schools should not directly be concerned with moral education as that would amount

to encroaching on an area which properly belongs to the home. It would also conflict with the ideal of secularism.

- (b) Schools cannot contribute significantly towards the moral development of the child as the child is under the greater influence of the home and community.
- (c) While the school and home atmosphere are important, deliberate systematic moral instruction would still be necessary in the schools.
- (d) Schools, being the nurseries of the future, have a great role to play in moral education.

Moral Education, Values and Discipline in Schools

Moral education has been a distinct problem of national importance in the USA and in Nigeria. The aims of formal education have not engaged the serious attention of a good many lay public who could have a direct stake in moral education and who ought to be as concerned as the professional educator.

While there is a general dissatisfaction with the fall in standards/values of children in the schools and great disenchantment with the disregard for moral education and values in personal and public life, there has been no concerted attempt on the part of education to address itself squarely to the problem of moral education in the schools. The coolness of the government/boards of education and the educational institutions toward this issue might be due to the fact that the society would not be able to cut an ice in what is essentially a larger social problem.

Central of meaningful discussion on the nature and scope of moral education in the schools is the concept of morality itself. To some, morality has meant primarily a manner of conforming to previous actions based upon certain specified virtues (either handed down by custom and tradition or currently upheld by society). Moral education becomes the process by which these virtues are learned by the individual. Moral

education does have a cognitive component which is essentially a matter of developing appropriate behaviour and habits. That is, it is more than character development. However, even simple character development is absent from many students both within and outside the United States' public school system. It must be noted that the evolution of sound policy decisions and effective action strategies in moral education as well as all other areas of education, require, as a first step, that we engage ourselves in clear, hard thinking on the difficult dimensions of the problem.

Self-discipline: Freedom and Purpose

If a child is to learn self-discipline, he/she must have some freedom of choice. Freedom can be dangerous, however; it can give the child an opportunity to choose what he/she will or will not do; how he/she will or will not behave; and the child may choose unwisely. A child must be given limits of choice—not too much freedom and not too much curtailment. But that does not appear to be the case in many public schools in the USA. Although the school is a good place in which to learn how to use freedom and where there are teachers who can save a child from the worst mistakes, the school has become a place where, seemingly, too much freedom has been given. Freedom should first be limited to simple things—behaviours to which the student is accustomed. Freedom should be given gradually—a reward—a thing which is earned. No one disciplines himself or herself unless there is a purpose. If there is a purpose, and the child is keen on that purpose and believes that the purpose can be accomplished, then the child is more likely to give up that which he likes and do things which he/she may not like—just for the sake of doing something which is good. The child must be able to see what is right and good; feel a desire for what is right and good and then try to accomplish behaviours which are right and good.

It must be remembered that a teacher cannot alter a child's nature, but a teacher can guide a child—show a child, not to be a bully, but to be a leader. The teacher should be in a position to

help a student develop feelings and such virtues as courage and tenderness so that these virtues become permanent attitudes. The more a teacher behaves as a parent, the more the class should become like a family. If a family is as it should be, then the classroom should become a place where lasting attitudes can be developed and sustained. Education should be for life and it should aim at helping students to be good individuals and members of their society.

Blame and Punishment

Blame and punishment may help students to avoid what is bad because they give pain. Teachers blame students who have done badly, and they sometimes give them punishment in the hope that bad behaviour or conduct or bad work will become associated in their mind with painful thoughts. Although natural punishments give us pain, they do not make us feel ill-treated, for we see that they are natural. The more a student can see that the punishment is natural, the more good the punishment can accomplish. In a class where work is interesting and good conduct is the custom, students do not often desire what is bad.

Meaningful Learning and Positive Discipline

The process of cultivating a positive type of discipline is interwoven with the larger challenge of creating a milieu in which learning and healthy growth will thrive. In essence, where discipline is based on self-control, responsibility and an understanding of the causes and consequences of behaviour, the process of meaningful learning is fostered. In the same token, where learning is meaningful, self-control and responsibility of positive discipline can flourish. The basic components for creating and maintaining an atmosphere conducive both to meaningful learning and to positive discipline can be divided into two categories; namely, constructive-preventive and remedial-ameliorative. The first category concerns that which builds a milieu to facilitate learning and minimize problem behaviour. The second category is comprised of those components necessary to meet and solve problems of individual

students and classroom groups.

The cornerstone of the teaching-learning process is the atmosphere of the classroom and the relationships between students and teachers. Mutual trust and respect can serve to replace authority as a basis for a beneficial relationship between teacher and student. Another foundation block for positive discipline and classroom interaction is that of programme-planning with a problem-solving orientation. Where learning is meaningful and relevant to the lives of the students, boredom, frustration with their accompanying discipline problems can be avoided. Finally, the component in promoting learning and minimizing discipline problems is the establishment of limits. It is necessary that limits be maintained to safeguard the goals of growth through the process of legitimate exploration and mastery of new situations. It should be noted that strategies for establishing and applying limits so as to support a trusting relationship, facilitate and nurture self-control and the process of learning.

Self-discipline, Understanding and Permissiveness

Discipline should lead to self-discipline and is sometimes placed in contraposition with love as if it were a punitive force. A teacher may, and indeed must, control his/her students, but is failing to fulfill the teaching duty if he/she is not helping students to learn how to control themselves. In other words, discipline should lead to self-discipline.

Permissiveness is often considered love's vehicle for achieving the common purposes most parents/guardians have for their children. Understanding must also be added to love as a vehicle for accomplishing teaching and parental goals. While permissiveness must fade as a tool for classroom achievement, understanding remains as the magic word.

The gap between understanding and changing behaviour has not yet been widely accepted by many educators and scholars who seem to believe that understanding students is sufficient for the

production of learning. The teacher's understanding of the student may gain the student's attention or affection. This in turn will increase the possibility of learning the material being taught. Thus, the teacher can plan the teaching programme more wisely than otherwise. However, it should be noted that understanding of self and others does not necessarily improve the learning behaviour.

Permissiveness in the classroom may achieve certain goals, but will not be workable efficiently in certain schools in the public sector of the USA. Governments and school boards need to go back to tougher disciplinary controls. Some state governments of Nigeria have done so. As previously stated, in the USA paddling as a form of punishment has been legalized in 41 states as of September, 1987. Some parents in certain states did fight against the legislation of such punishments, arguing that the states had now legalized child abuse!

Permissiveness can rarely be more efficient than the goals set for purposeful directions of the educational system. Understanding is one of the most powerful qualities in human relations which inspires humans to want to learn what other want. But understanding needs direction and its success needs evaluation if it is to be made efficient in accomplishing educational goals and purposes. If the teacher's goal is to teach certain subject matter efficiently and to train students for good learning habits, then a disciplined environment with understanding would seem to be the proper focus of educational methods and practices. Understanding and permissiveness do not go hand-in-hand in combating indiscipline in our educational process.

The better the discipline, the less the need for punishment. The root of an offence is the desire to do what is known to be wrong. If a student does not know what he/she has done wrong, then he/she cannot be blamed or punished for that error. If the student has done wrong, knowing it to be wrong, the teacher is responsible for finding the root cause. The punishment must be suitable so as to reform the offender and warn

others not to follow in the offender's footsteps. Educators cannot itemize punishment, because punishment must fit the offence, the circumstances of the offence and the needs of the class.

Effective classroom discipline should be designed so as to train students to face and solve learning problems in whatever the subject matters. Students must be prepared to handle future learning situations. Teachers are not forced to be instruments of society for conformity beyond the minimum standards that the community has clearly set. To gain satisfaction with society's goals, teachers must set goals commensurate with the society in which the students are to function. An educational system that adheres to rigorous standards of conformity beyond the need to learn the basic tools for social survival is not only in

danger of teaching maladaptive behaviour for the future but may also alienate the brightest and most creative students from the educational system at present and from the society in the future. Administrators and teachers alike should be retrained in this area of school discipline and classroom management. In-service courses need to be offered for in-coming administrators so as to acquaint them with new ideas and techniques for dealing with unruly students that have become a part of our educational system. And finally, parents must inculcate discipline and moral values in their children without which the problems of indiscipline will continue in schools. The parents must play a larger role so as to effect the smooth running of our schools and our total educational environment.

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Students' Perception of Teachers at Different Educational Levels of Public and Government Schools

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STUDIES show that because of varied environments, different types of schools foster different traits in students (Opal and Sen, 1980), develop different motives of need for achievement in scholastic pursuits (Salm, 1974; Sharma, 1974; Johnson, 1976; and Opal and Sen, 1980) and develop different levels of interest in co-curricular, literary, cultural and scientific activities (Sharma, 1974 and Opal and Sen, 1980). They also inculcate different value systems in the children (Sharma, 1974; Pillai, 1975; and Pandey, 1977). A positive correlation between mental ability and environment has also been obtained (Kumar et al, 1973).

Developmental studies on person perception demonstrate that with advancement in age, the perception of a child of other persons change in a drastic way (Scodel and Mussen, 1953; Crockett and Meidenger, 1956; Kates, 1959; Lipatz, 1960; Khon and Fiedler, 1961 and Rabin, 1962). So there may be differences in the students' perception of teachers due to various educational levels—middle, lower secondary and higher secondary. It is also so because older children due to accumulated experiences organise and perceive the external world in a way in which the younger children cannot. Moreover, the personality

characteristics of the students of various educational levels are quite different.

Keeping in view the above analysis, the present study was carried out so as to compare the students' perception of teachers of middle, lower secondary and higher secondary educational levels of public and government schools.

Methodology

Sample

Cambridge Public School, Srinivaspuri, New Delhi and Government Higher Secondary School No.3, Sarojni Nagar, New Delhi were selected for the present study. Two sections of middle and lower secondary educational levels (Classes VIII and X representing these levels) from each school were taken randomly but at the higher secondary educational level (Class XII) only two sections (having provision of teaching Economics) were available in both the schools. Therefore, both the sections at this stage were taken. Thus a total of 81, 75 and 60 students of Classes VIII, X and XII, respectively, were taken from the Cambridge School and 69, 63 and 69 students of the same classes, respectively, were

taken from the Government School. The percentage of marks obtained by the students at the final examinations of the previous year were recorded from the school office. Separate Q_1 and Q_3 values of each educational level for two schools were found out. The students obtaining Q_1 and below, Q_3 and above and between Q_1 and Q_3 were kept in low, higher and average achievement groups. Thus, 60 subjects at each educational level in each school, totalling 360 subjects, were taken.

Tool Used

Students' Perception Rating Scale, developed by the researcher, was used to measure the students' perception of teachers. There are 16 items in the scale. Each item represents a five-point rating scale. These 16 items consist of 16 questions of a successful teacher relating to subject expertise, personality factors, strategies, methods and techniques in the classroom and guidance. The students are instructed to rate the teacher keeping in view the degree of a certain quality, the teacher in question possesses. The responses were scored by awarding 0 to the lowest ranked quality and 4 to the highest ranked quality.

Procedure

The subjects of each educational level in both the schools were contacted separately with the help of their class teachers and proper seating arrangement was made for them in a separate classroom. The subjects were given the Students'

Perception Scale, and were instructed to rate their Social Studies teacher on the 16 scales. The students were assured that their ratings would not be disclosed to their teachers.

Results

The total scores of a subject were found out by adding his rating on all the 16 scales and Critical Ratio (CR) was applied to find out significant differences. The means, SDs of each group and the results of CR are given in Table 1.

A perusal of Table 1 reveals that the mean perception scores of the middle educational level students of the public and government schools are 27.22 and 39.90 and their standard deviations are 14.54 and 16.57, respectively. The value of CR between the two means was found to be 4.45 which is significant at .01 level. It means that the two means differ in significant way showing that there is a significant difference between the students' perception of teachers at the middle educational level of public and government schools.

Table 1 further reveals that the mean perception scores of the lower secondary educational level of the public and government schools are 37.77 and 51.93 and their standard deviations are 8.75 and 6.23, respectively. The CR value between the two means is found to be 10.21 which is statistically significant at .01 level. It leads us to conclude that the two means differ significantly.

TABLE 1
Mean Perception Scores of Students of Middle, Lower Secondary and Higher Secondary Education Levels of Public and Government Schools, their SD's and CR Values Showing Comparisons among Groups

Comparison	Means	SDs	CRs	Remarks
1. Between middle educational level of public and Government school	Public = 27.22 Govt. = 39.90	Public = 14.54 Govt. = 16.57	4.455	Significant at .01
2. Between lower secondary educational level of public and Government school	Public = 37.77 Govt. = 51.93	Public = 8.75 Govt. = 6.23	10.21	Significant at .01
3. Between higher secondary educational level of public and Government school	Public = 33.72 Govt. = 39.23	Public = 11.01 Govt. = 11.65	2.67	Significant at .01

The same table also reveals that the mean perception scores of the students of higher secondary educational level of the public and government schools are 33.72 and 39.23 and their standard deviations are 11.01 and 11.65, respectively. The value of CR between the two means is found to be 2.67 which is significant at .01 level of confidence, showing that there is a significant difference between the students' perception of teachers at the higher secondary educational level also of the public and government schools.

If we see the results of Table 1 as a whole, a general trend seems to run through all the findings which shows that the mean perception scores of the government school are significantly greater than those of the students of the public school at all the educational levels.

Discussion

The two types of schools differ in their structural and organisational set-up and follow different approaches in undertaking curricular and co-curricular activities. Such different features lead to inculcation and nourishment of two different sets of values. These values, undoubtedly, become part and parcel of the personalities of the students. Such inference of value transmitting aspect of school has been advocated by Rao (1975), Pandey (1977) also concluded that private and central schools induce two different sets of values. So much so the study of Opal and Sen

(1980) reveals that different types of schools foster different traits in their students. About the same results were obtained by Pillai (1975). We know that after the age of six years most of the child's time is spent in school. Thus after home and the family, school is the most important social institution which plays an immense role in shaping the personality of a child. In such situation, the difference in students' perception of teachers seems to be the natural resultant.

It seems that the student of public schools do not develop those values and traditions relating to teachers which are being cherished in India since long. Moreover, it is our common experience that in public schools, students have much more freedom to discuss different things and to come in contact with teachers than their counterparts in government schools. This closeness with the teachers makes the students of public schools aware of the fact that the teacher's are not unapproachable or persons living in a society other their own. Such a view fosters in them the values different from those of the students of government schools. Hence the students of public schools perceive the teacher more critically than the students of government schools. From the teacher's angle also, the finding can be explained. It is possible that the teachers of government schools are more loving, affectionate, kind and interested in children than the teachers of public schools. Therefore, their students have perceived them in a more positive way than the students of public schools.

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Pupils' Concepts According to the Religious Denomination of the Schools They Attend

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THE Constitution of India does not prevent the State from giving financial assistance to educational institutions sponsored by religious denominations. Denominational schools, run by religious trusts or communities, thus provide opportunities for imparting religious education to the pupil. Catholic schools, in that respect, are the pioneers where religious education is carried out to its fullest extent. Protestant schools, not rigid in their outlook, do not go for religious education in a rigid way, but the Bible study, the display of the Holy Cross, most teachers being Christians, i.e. the whole school environment leaves a Christian impression on their pupils. Urdu-medium schools, run by Muslim religious trusts, have one strong point in their favour, i.e. having pupils of their own religious community as Urdu is the language learnt by the devout Muslims and thus secure the fullest scope of exercising their educating right without hurting the sentiments of the pupils belonging to other religious communities. Hindu schools, Jain Schools, Sikh schools, Parsi schools as also Catholic and Protestant schools, while accepting pupils of other religious communities, stress the significance of their own religions through prayers,

singing of hymns, celebration of specific religious festivals, etc. Besides, we have non-denominational schools which do not provide religious education and environment in accordance with the rules of our secular democratic constitution.

Objective

Education is essentially the transmission of a body of knowledge and values. The investigator, in this study, has tried to test pupils' secular concepts according to their religions and the religious denomination of the school they attend.

Method

Sample

Sixteen Denominational schools of the city of Bombay, two under each head of existing eight religious denominations in India, viz., Hindu, Muslim, Sikh, Jain, Parsi, Prarthana Samaj, Catholic and Protestant, were taken as samples for the study. The last two, i.e. Catholic and Protestant, though belong to the same religion, Christianity, differ in their principles of adherence.

So they were taken under two distinct heads of Denominational schools. English-medium elite schools of Bombay are mostly managed by either Catholic or Protestant trust and so they do represent a section of population of Denominational schools. In order to maintain the equal proportion, sixteen non-denominational schools in the city of Bombay were also taken as samples for the study. No grouping was done among non-denominational schools because of their non-sectarian nature. Two thousand pupils of 15-17 years age-group were taken as the subjects of this study.

Procedure

Since the objective of test construction is to measure the religious and secular concepts being hypothesized as a significant dimension of personality, an eight-point rating scale was used to score the concepts of the pupils according to their scale values. The eight-point rating scale is in descending order, 'Very Much', 'Much', 'Little', and 'Very Little' for the "Religious" and in ascending order 'Very Little', 'Little', 'Very Much' for the "Secular" score according to scale values. According to score, the data were classified into "Religious" and "Secular" concepts along with the proportions of secular concepts (Tables 1 and 2). The pupils' concepts according to the religion and the religious denominations of the schools they attended are tabulated in Table 3 (Denominational schools) and Table 4 (Non-denominational schools). 't' ratios for the difference in proportions of secular concepts have been worked out by dividing the difference in proportions of secular concepts by the standard deviation of the difference (Tables 3a, 4a).

Results and Discussion

Pupils' secular concepts according to their religion and the religious denomination of the schools they attend are given in Tables 3 and 4. Muslim schools lag behind in this respect. The pupils of these schools are found much less secular in their concepts than their counterparts in other schools. The reason lies in the facts that the pupils of Catholic, Protestant and Hindu schools come from various religious communities which make

them more congenial as a group and as a result more secular in their concepts, whereas in these schools, the environment, i.e. the pupils and teachers of the same religious community and the religious education, working together, make the pupils less secular in their concepts. 't' test (Table 3a) shows that there is a very significant difference in proportions of secular concepts of the pupils of the same religion and of different religions of Denominational schools. 't' value has been calculated as 7, which is tested according to t.01 level of confidence, i.e. 2.58, and is found highly significant.

It may be noted here that in Denominational schools, the pupils of the same religion are given religious education and they, in turn, are deeply influenced by sectarian religious preaching and environment. In these schools, the pupils of different religions are not compelled for religious education. For example, in Catholic Schools (Denominational schools) when Catholic pupils are offered course in Cathéchism, i.e. the teaching of the Bible, non-Catholics are given moral education. Hence religious education, as our test show, makes the pupils more religious and less secular in their concepts. So we find a highly significant difference in the pupils' secular concepts in these schools (Table 3a). However, in non-denominational schools too, 't' test shows a significant difference in the secular concepts of the pupils of major and minor religious groups of the schools (Table 4a). Here, our calculated 't' value lies at 2.58 which is greater than t.05 at 1.96. Non-denominational schools in India, as mentioned earlier, do not provide religious education to their pupils in accordance with the strict principles of secular democratic constitution. These schools in India, on the other hand, are mostly attended by the Hindus, the major religious community of the country. The minority religious groups attend these schools in much lesser number. But inspite of their not getting religious education and environment in these schools, they become less secular in their concepts than their major counterparts because of their inherent group-consciousness. So we can conclude that even in our secular democratic context our children are

conscious of their own religious existence and sectarian religious preaching makes them less secular in their concepts

Learning involves interaction between the learner and his environment and its effectiveness relates to the frequency, variety and intensity of the interaction. So, in our multi-religious social

setting, religious education should not mean education of one's own particular religion and thereby restrict him to his own denominational school group. The aim of religious education need not be the religious commitment of the pupils but the education about religion as well as the education of religious beliefs.

TABLE 1
Denominational Schools : Pupils' Concepts (15-17 Years Age-group)

Sr. No.	Name of the School	Total No of Individual Responses	Individuals in Religious Concepts	Terms of Secular Concepts	Fraction of Secular Concepts (P_1)
1	Catholic School No A	75	55	20	$20/75=0.266$
2	Catholic School No B	75	65	10	$10/75=0.133$
3	Protestant School No.A	65	40	25	$25/65=0.38$
4	Protestant School No.B	65	49	16	$16/65=0.246$
5	Muslim School No A	65	62	3	$3/65=0.046$
6	Muslim School No B	65	59	6	$6/65=0.092$
7	Parsi School No A	55	40	15	$15/55=0.272$
8	Parsi School No B	55	42	13	$13/55=0.236$
9	Jain School No A	65	60	5	$5/65=0.077$
10	Jain School No.B	65	58	7	$7/65=0.107$
11	Prarthana Samaj School No.A	55	48	7	$7/55=0.127$
12	Prarthana Samaj School No B	65	50	5	$5/65=0.077$
13	Sikh School No A	55	52	3	$3/55=0.054$
14	Sikh School No.B	55	48	7	$7/55=0.127$
15	Hindu School No A	60	40	20	$20/60=0.333$
16	Hindu School No.B	60	49	11	$11/60=0.183$
		1000	827	173	$0.173=2.765$

*To maintain anonymity, the names of the Denominational Schools are not given in the Table

TABLE 2
Non-denominational Schools. Pupils' Concepts (15-17 Years Age-group)

Sr. No.	Name of the School	Total No, of Individual Responses	Individuals in Religious Concepts	Terms of Secular Concepts	Fraction of Secular Concepts (P_1)
1	School No. 1	60	20	40	$40/60 = 0.667$
2	School No. 2	65	25	40	$40/65 = 0.615$
3	School No 3	90	32	58	$58/90 = 0.644$
4	School No. 4	60	40	20	$20/60 = 0.333$
5	School No 5	70	15	55	$55/70 = 0.786$
6	School No. 6	65	25	40	$40/65 = 0.615$
7	School No. 7	60	23	37	$37/60 = 0.617$
8	School No 8	80	22	58	$58/80 = 0.725$
9	School No. 9	55	11	44	$44/55 = 0.800$
10	School No. 10	75	25	50	$50/75 = 0.667$
11	School No 11	60	19	41	$41/60 = 0.683$
12	School No. 12	65	20	45	$45/65 = 0.692$
13	School No 13	55	25	30	$30/55 = 0.545$
14	School No. 14	50	22	28	$28/50 = 0.560$
15	School No. 15	50	22	28	$28/50 = 0.560$
16	School No. 16	40	23	17	$17/40 = 0.425$
		1000	369	631	$0.631 = 9.936$

TABLE 3
Denominational Schools : Pupils' Concepts According to Religion

Total No. of Responses		Same Religion of the School		Different Religions of the School		Proportion of Pupils' Secular Concept	
		Religious Concept	Secular Concept	Religious Concept	Secular Concept	Same Religion	Different Religion
School No 1	Catholic	75	25	2	30	18	
School No. 2	Catholic	75	22	-	43	10	
School No 3	Protestant	65	10	5	28	22	
School No 4	Protestant	65	14	2	35	14	
School No 5	Muslim	65	62	3	-	-	
School No 6	Muslim	65	59	6	-	-	
School No. 7	Parsi	55	10	3	30	12	
School No 8	Parsi	55	9	2	33	11	
School No 9	Jain	65	39	-	21	5	
School No 10	Jain	65	25	-	33	7	
School No 11	Prarthana Samaj	65	60	5	-	-	
School No. 12	Prarthana Samaj	55	48	1	2	4	
School No 13	Sikh	55	30	-	22	3	
School No 14	Sikh	55	25	1	24	6	
School No 15	Hindu	60	40	20	-	-	
School No. 16	Hindu	60	49	11	-	-	61/588 112/412
		1000	527	61	300	112	= 0.104 (P _s) = 0.272 (P _d)

TABLE 3A
Denominational Schools. t Ratio for the Difference in Proportions of Secular Concepts of Pupils of Same Religion and of Different Religion

P ₁	-	P ₂	0.272	-	0.104	=	0.168	
S ₂	(Estimated Variance)					=	0.173(1 - 0.173)	= 0.143
S	(Standard Deviation)					=	0.378	
Sp ₆	-	P ₁	=	0.378	$\sqrt{1588 + 1442}$	=	0.024	
t	calculated	=	$\frac{0.168}{0.024}$			=	7	
t	calculated > t.012 58							

Difference in the proportions of secular concepts of the pupils of Denominational Schools is significant at 0.01 level

TABLE 4
Non-denominational Schools: Pupils' Concepts According to Religion

Total No of Responses		Pupils Belonging to the Major Religion Group of the School		Pupils Belonging to the Minor Religion Group of the School		Proportion of Pupils' Secular Concept	
		Religious Concept	Secular Concept	Religious Concept	Secular Concept	Major Religious Group (P ₁)	Minor Religious Group (P ₂)
School No. 1	60	20	40	-	-		
School No 2	65	25	40	-	-		
School No 3	90	32	58	-	-		
School No 4	60	28	18	12	2		
School No 5	70	12	51	3	4		
School No 6	65	25	40	-	-		

School No 7	60	20	31	3	6		
School No. 8	80	10	53	3	5		
School No. 9	55	11	44		-		
School No 10	75	25	50	-			
School No 11	60	10	41	-			
School No 12	65	17	42	3	3		
School No 13	55	25	30	-	-		
School No 14	50	22	28	-	-		
School No 15	50	18	24	4	4		
School No 16	40	23	17	-	-	607/0.48	24/52
	1000	441	607	28	24	= 0.64 (P_7)	= 0.462 (P_8)

TABLE 4A

Non-denominational Schools' t Ratio for the Difference in Proportion of Secular Concepts of Pupils of Major Religious Groups and Minor Religious Groups

P_7	-	P_8	0.64 - 0.462	=	0.178		
S^2	=		0.631(1 - 0.631)	=	0.233		
S	=		0.483				
Sp_7	-	P_8	=	0.483	$\sqrt{0.233 + 1.62}$	=	0.069
t	calculated	=	$\frac{0.178}{0.069}$	=	2.58 > 1.05	1.96	

* Difference in the proportions of pupils' Secular Concepts of both the groups is significant at 0.05 level

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Achievement Motivation of Scheduled Tribe Students of Himachal Pradesh

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THE society of Himachal Pradesh is a unique blend of tribal and non-tribal, pastoral and industrial population. Out of the total population of 42,80,818 persons, 4.61 per cent are tribals (1981 census). Gaddis, Kinnauras, and Lahaulas are the main tribes of the Pradesh living in the Chamba, Kinnaur and Lahaul-Spiti districts. The tribal society has been deprived for centuries of social interaction with the main stream of society. Hence, they lack the spirit of competitiveness in all walks of life. Being a self-centered and self-reliant society, cut off from the outside world, there is a lack of zest for excellence in life.

Motivation has come to be regarded as one of the major domains of psychology and education and it constitutes an integral part of the scientific endeavour to interpret human and infra-human behaviour. A need to achieve may be defined as the need to meet or exceed standards of excellence. People high in achievement motivation tend to exert more effort and to do better than low achievers. Studies conducted in the field of achievement motivation reveal that "early training of children to be independent and master certain skills promotes high need for achievement, if that training does not indicate the rejection of the child

by the parents" (McClelland 1961). Atkinson (1964) defined achievement motivation "as the tendency to endeavour for the attaining of goal". A specific motive is concerned with the attainment of a specific type of goal.

Bruckman (1966), Ollendick (1974), and Pathak (1974) found no significant difference in the achievement motivation of boys and girls, whereas, Minigione (1965), Chaudhary (1971), Gokulnathan (1972), and Aggarwal (1974) found that girls had significantly higher achievement motivation than boys.

Ojha and Jha (1979) found that middle class socio-economic status, nuclear family and enterpreneurial occupations are associated with high achievement motivation, while upper and lower class socio-economic status, joint family system and bureaucratic occupations are associated with low achievement motivation.

Desai (1971), Pathak (1974), and Jha (1978) observed significant positive relationship between achievement motivation and intelligence. However, contrary to these, Chaudhary (1971) and Dutt (1983) found no significant relationship between achievement motivation and intelligence.

Objectives

The aims of this study were to investigate the effects of sex, family type and intelligence on the achievement motivation of scheduled tribe students along with their double and triple interactional effects.

Hypotheses

1. Scheduled tribe boys and girls differ significantly in relation to their achievement motivation.
2. Students coming from different types of families, e.g. nuclear and joint families, do not differ significantly in relation to their achievement motivation.
3. Scheduled tribe students do not differ significantly in relation to their achievement motivation at different levels of intelligence, i.e. high and low.
4. Sex and family type do not interact significantly in relation to the achievement motivation of students.
5. Sex and intelligence do not interact significantly in relation to the achievement motivation of scheduled tribe students.
6. Family type and intelligence do not interact significantly in relation to the achievement motivation of students.
7. Sex, family type and intelligence do not interact significantly in relation to the achievement motivation of students.

Method and Procedure

Sample

The present study was conducted on 300 scheduled tribe students (150 boys and 150 girls). The sample included students from three main tribes namely, Gaddis, Kinners or Kinnauras and Lahaulas selected from the three districts, e.g. Chamba, Kinnaur and Lahaul-Spiti of Himachal Pradesh. Boys and girls studying in Grades IX and X at High and Senior Secondary schools of the above-mentioned districts were selected randomly.

Tools for Data Collection

For the collection of required information the following psychological instruments were used:

(a) *General Mental Ability Test (Hindi Version)* by Dr. S. Jalota. This test contains 100 items, which are of seven types, namely, (1) Vocabulary-similars; (2) Vocabulary-opposites; (3) Number-series, (4) Classificatory; (5) Best-answers; (6) Inferences or reasoning; and (7) Analogies. Reliability determined by split-half method was 0.9046 which after correction by Spearman-Brown method came out to be 0.9499. The validity of the test ranges from +0.50 to +0.78. The duration of the test is 20 minutes.

(b) *Achievement Motivation Inventory (Hindi Version)* by Piyag Mehta. This inventory consists of 22 items. For each item the subject has to check one out of the six choices. K-R-20 reliability was 0.67 and the split-half reliability was found to be 0.55. The time required to complete this inventory is 30 minutes.

The data thus collected were scored by using the procedure specified in the manual of each test. The subjects were assigned to high and low groups with regard to intelligence in the following manner:

- (i) The subjects who obtained intelligence scores above the mean score were classified as the high intelligence group.
- (ii) The students whose intelligence scores were equal to or less than the mean score were named as the low intelligence group.

Results and Discussion

To find out the main effects of sex (A), family type (B), and intelligence (C) along with their double and triple interactional effects, a $2 \times 2 \times 2$ factorial design was utilised involving two levels of sex, i.e. boys and girls (A_1, A_2), two levels of family type, i.e. nuclear family and joint family (B_1, B_2), and two levels of intelligence, i.e. high and low (C_1, C_2). A summary of the results is given in Table 1.

TABLE 1
Analysis of Variance

Source of Variation	df	SS	MS(V)	F-Ratio
Sex (A)	1	4.225	4.225	0.276
Family Type (B)	1	75.625	75.625	4.937*
Intelligence (C)	1	96.100	96.100	6.274*
Interaction (AXB)	1	28.900	28.900	1.887
Interaction (AXC)	1	5.625	5.625	0.367
Interaction (BXC)	1	0.025	0.025	0.0016
Interaction (AXBXC)	1	0.400	0.400	0.026
Error Variance	152	2328.200	15.317	
Total	159	2539.100		

*P < .05

Main Effects

Sex (A) The calculated value of 'F' for the main effect of sex on the achievement motivation of scheduled tribe students for df 1 and 152 came out to be 0.276, which is not significant even at .05 level of significance. Hence the hypothesis No. 1 that "scheduled tribe boys and girls differ significantly in relation to their achievement motivation" was rejected. It can be interpreted that the achievement motivation of boys and girls does not differ significantly.

The result corroborates the findings of Bruckman (1966), Ollendick (1974) and Pathak (1974) who also observed no significant difference in the achievement motivation of boys and girls. This result is not in agreement with Minigione (1965), Chaudhary (1971), Gokulnathan (1972), and Aggarwal (1974) who found that girls had significantly higher achievement motivation than boys.

Family Type (B) The obtained value of 'F' for the main effect of family type on achievement motivation for df 1 and 152 came out to be 4.937, which is significant at .05 level of significance. Hence the hypothesis No. 2 that "students coming from different types of families, e.g. nuclear and joint families, do not differ significantly in relation to their achievement motivation" was rejected. The students coming from nuclear families have significantly higher achievement motivation than the students coming from joint families.

Further, to find out the effect of family type on the achievement motivation of boys and girls at different levels of intelligence, their means of achievement motivation scores were compared by applying the 't' test. The means are given in Table 2.

From these means of achievement motivation scores 't' values were computed. The results are given in Table 3.

TABLE 2
Means of Achievement Motivation Scores of Boys and Girls at Different Levels of Intelligence in Relation to their Family Type

Levels	A ₁ C ₁ B ₁	A ₁ C ₁ B ₂	A ₁ C ₂ B ₁	A ₁ C ₂ B ₂	A ₂ C ₁ B ₁	A ₂ C ₁ B ₂	A ₂ C ₂ B ₁	A ₂ C ₂ B ₂
Means of Scores	14.45	12.30	12.60	10.30	13.65	13.00	12.35	11.95

TABLE 3
Difference Between Means of Achievement Motivation Scores of Boys and Girls at Different Levels of Intelligence in Relation to their Family Type, Standard Error of the Difference Between Means and t-Ratios

Pairs of Comparison	Mean Differences	SE _D	t-Ratios
A ₁ C ₁ B ₁ -A ₁ C ₁ B ₂	14.45-12.30=2.15	0.875	2.456*
A ₁ C ₂ B ₁ -A ₁ C ₂ B ₂	12.60-10.30=2.30	0.875	2.628**
A ₂ C ₁ B ₁ -A ₂ C ₁ B ₂	13.65-13.00=0.65	0.875	0.742
A ₂ C ₂ B ₁ -A ₂ C ₂ B ₂	12.35-11.95=0.40	0.875	0.457

*p < .05 **p < .01

Table 3 indicates that the values of 't₁' and 't₂' are significant at .05 and .01 levels of significance, respectively. The boys with high intelligence level coming from nuclear families have significantly higher achievement motivation than the boys with high intelligence level but coming from joint families. Similarly, the boys with low intelligence level coming from nuclear families have significantly higher achievement motivation than the boys with low intelligence level coming from joint families. The values of 't₃' and 't₄' are not significant statistically. This shows that the girls with high as well as low intelligence levels coming from nuclear families do not differ significantly from the girls with high as well as low intelligence levels coming from joint families. However, the girls coming from nuclear families have higher means of achievement motivation scores than the girls coming from joint families.

This result is substantiated by Ojha and Jha (1979), who also observed that the students coming from nuclear families had significantly higher achievement motivation than the students coming from joint families. This high achievement motivation in the students coming from nuclear families may be attributed to the fact that nuclear families being small, the children get maximum opportunity for early training to be independent

and to master certain skills which promote their need for achievement. Contrary to this, in the joint families, there are many elders to take care of the child and to manage things for him. He/She gets very little opportunity for training to be independent and to master some skills.

Intelligence(C): The computed value of 'F' for the main effect of intelligence on the achievement motivation of scheduled tribe students for df 1 and 152 came out to be 6.274, which is significant at .05 level of significance. Hence the hypothesis No. 3 that "scheduled tribe students do not differ significantly in relation to their achievement motivation at different levels of intelligence, i.e. high and low" was rejected. It can be said that the students with high intelligence level have significantly higher achievement motivation than the students with low intelligence level.

Further, to find out the effect of intelligence on the achievement motivation of the boys and girls coming from different types of families, their means of achievement motivation scores were compared by applying the 't' test. The mean scores are given in Table 4.

From these means of achievement motivation scores 't' values were calculated. The results are given in Table 5.

TABLE 4
Means of Achievement Motivation Scores of Boys and Girls coming from Nuclear and Joint Families at Different Levels of Intelligence

Levels	A ₁ B ₁ C ₁	A ₁ B ₁ C ₂	A ₁ B ₂ C ₁	A ₁ B ₂ C ₂	A ₂ B ₁ C ₁	A ₂ B ₁ C ₂	A ₂ B ₂ C ₁	A ₂ B ₂ C ₂
Means of Scores	14.45	12.60	12.30	10.30	13.65	12.35	13.00	11.95

TABLE 5
Difference Between Means of Achievement Motivation Scores of Boys and Girls Coming from Nuclear and Joint Families at Different Levels of Intelligence, Standard Error of the Difference Between Means and t-Ratios

Pairs of Comparison	Mean Differences	SE _d	t-Ratios
A ₁ B ₁ C ₁ -A ₂ B ₁ C ₁	14.45-12.60 = 1.85	0.875	2.11*
A ₁ B ₁ C ₁ -A ₂ B ₂ C ₁	12.30-10.30 = 2.00	0.875	2.285*
A ₂ B ₁ C ₁ -A ₂ B ₁ C ₂	13.65-12.35 = 1.30	0.875	1.485
A ₂ B ₂ C ₁ -A ₂ B ₂ C ₂	13.00-11.95 = 1.05	0.875	1.20

* p < .05

Table 5 shows that the values of ' t_1 ' and ' t_2 ' are significant at .05 level of significance. The boys with high intelligence level coming from nuclear families have significantly higher achievement motivation than the boys with low intelligence coming from nuclear families. Similarly, the boys with high intelligence level coming from joint families have significantly higher achievement motivation than the boys with low intelligence level coming from the joint families. The values of ' t_1 ' and ' t_2 ' are not significant even at .05 level of significance. This indicates that the girls with high intelligence level coming from nuclear as well as joint families do not differ significantly in relation to their achievement motivation from the girls with low intelligence level coming from nuclear as well as joint families. However, the girls with high intelligence level coming from nuclear as well as joint families have higher means of achievement motivation scores than the girls with low intelligence level coming from nuclear as well as joint families.

The result is in agreement with that of Desai (1971), Pathak (1974), and Jha (1978), who also found significant positive relationship between achievement motivation and intelligence. This result is contrary to that of Chaudhary (1971) and Dutt (1983), who observed no significant positive relationship between achievement motivation and intelligence. Positive relationship between achievement motivation and intelligence can be explained by two intertwined factors. First of all, high need for achievement actually increases intelligence—not a lot, but significantly. This is because high achievement need causes the person to develop some of aptitudes that go into the measurement of intelligence. Secondly, intelligence itself affects the need for achievement. The brighter the people are, the more they are challenged by the difficult tasks (Morgan, 1985).

Interactional Effects

Sex X Family Type (A X B) : The calculated value of 'F' for the interactional effect of sex and family type on the achievement motivation of students for df 1 and 152 came out to be 1.887,

which is not significant even at .05 level of significance. Hence the hypothesis No 4 that "sex and family type do not interact significantly in relation to the achievement motivation of students", was accepted.

Sex X Intelligence (A X C) : The obtained value of 'F' for the interactional effect of sex and intelligence on the achievement motivation of students for df 1 and 152 came out to be 0.367, which is nowhere near the significance level even at .05 level. Hence the hypothesis No.5 that "sex and intelligence do not interact significantly in relation to the achievement motivation of scheduled tribe students", was accepted.

Family Type X Intelligence (B X C) : The computed value of 'F' for the interactional effect of family type and intelligence on the achievement motivation of students for df 1 and 152 came out to be 0.0016 which is not significant even at .05 level of significance. Hence the hypothesis No. 6 that "family type and intelligence do not interact significantly in relation to the achievement motivation of students" was accepted.

Sex X Family Type and Intelligence (A X B X C) : The observed value of 'F' for the triple interaction effect of sex, family type and intelligence on the achievement motivation of students for df 1 and 152 came out to be 0.026, which is not significant even at .05 level of significance. Hence the hypothesis No. 7 that "sex, family type and intelligence do not interact significantly in relation to the achievement motivation of student" was accepted.

Conclusion

The following conclusions have been drawn from the interpretation of the results:

1. Scheduled tribe boys and girls do not differ significantly with regard to their achievement motivation.
2. Students coming from nuclear families have significantly higher achievement motivation than those coming from joint families.
3. Students with high intelligence level have

- significantly higher achievement motivation than those with low intelligence level.
4. Sex and intelligence do not interact significantly in relation to the achievement motivation of scheduled tribe students.
 5. Sex and intelligence do not interact significantly in relation to the achievement motivation of students.
 6. Family type and intelligence do not interact significantly in relation to the achievement motivation of scheduled tribe students.
 7. The triple interactional effect of sex, family type and intelligence in relation to the achievement motivation of scheduled tribe students is not significant

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Effectiveness of Non-formal Education Programme in Chittoor District

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THE present system of formal education which expects the child to come to school during day time for his education is excluding a vast majority of children of school-going age and living below the poverty line. There is enormous dropout rate in primary schools. It is increasingly realised that the problem of non-starters and dropouts should be tackled through an alternative strategy, i.e. non-formal education. It is also realised that the objective of universalisation of primary education can be achieved only if the non-formal education programme functions effectively.

Andhra Pradesh is one of the nine educationally backward states in our country. Non-formal education for children in the age-group of 9-14 is in operation in all districts of Andhra Pradesh. Non-formal education in Chittoor district was also started in 1980 in three blocks, viz. Puttur, Punganur and Karvetunagar. The clientele are the dropouts and the non-school-going children in the age-group 9-14 years. The non-formal education centres are expected to complete phase I within a duration of 2.5 years. Phase I roughly corresponds to the lower primary stage. Having started the non-formal education (NFE) programme with the hope that it would help

universalisation of primary education and provide a golden opportunity for the non-starters and dropouts, it is necessary to make an evaluation study to find out how effectively the NFE programme is functioning.

Objectives of the Study

The main objectives of the present study were:

1. To obtain the proportion of (i) dropouts, (ii) time utilisation, and (iii) coverage in the NFE centres.
2. To obtain qualitative measurements of the performance of the participants of non-formal education in reading comprehension, writing, vocabulary, grammar, numeracy and problem areas.
3. To find out the professional background of the teachers in the NFE centres.
4. To identify the problems faced in the organisation of the non-formal education centres.
5. To find out the attitude of the teachers towards the non-formal education programme.

Hypotheses

The study was conducted with the following hypotheses:

1. The rate of dropouts does not vary significantly between male and female children in a year in the NFE centres.
2. There is no significant difference in the proportion of dropouts in the NFE centres in different blocks.
3. There is no significant difference in the proportion of dropouts in different years.
4. There is no significant difference in the proportion of time utilisation in different blocks.
5. There is no significant difference in the proportion of time utilisation in different years.
6. The proportion of coverage in the NFE centres does not significantly vary between boys and girls.
7. The proportion of coverage does not significantly vary between different blocks.
8. There is no significant relationship between the academic performance of the participants of NFE in each one of the performance areas (reading comprehension, knowledge (information), grammar, writing, vocabulary, numeracy and problem areas), on the one hand, and their (1) age, (2) sex, (3) caste, (4) family size, (5) family type, (6) family income, (7) family literacy index, and (8) achievement motivation, on the other hand.
9. There is no difference between the academic performance (on the whole) of the participants and the professional qualifications and experience of the teachers.
10. There is no association of professional qualifications and experience of the teachers and their attitude towards NFE.
11. There is no significant effect of the teacher variables (professional qualifications, experience and attitude) on the rate of dropouts in the NFE centres.

12. There is no significant effect of the attitude of the teachers towards NFE on time utilisation.
13. There is no significant agreement between the teachers working in the three blocks in facing similar problems in the organisation of the NFE centres.

Delimitation of the Study

The study was confined to the stage IV learners of the NFE centres in three blocks (Puttur, Punganur and Karvetinagar) of Chittoor district in 1984-85. The effectiveness of NFE is expressed only in terms of 1. dropout rate, 2. coverage, and 3. performance of the NFE learners.

Design of the Study

The present study attempted to assess the effectiveness of the non-formal education programme in Chittoor District. The assessment was made in terms of the following selected aspects of non-formal education:

1. Quantitative measurements of rate of dropouts, time utilisation and rate of coverage in the NFE centres.
2. Qualitative measurements of the performance of the participants in reading, reading comprehension, writing, numeracy and problem areas.
3. Professional background of the teachers in the NFE centres.
4. Problems faced by the teachers in the organisation of the NFE centres.
5. Attitude of the teachers towards the NFE programme.

Tools

To assess the accomplishment of the aforesaid objectives, the following tools were developed in the vernacular, namely, Telugu, by the investigator for the purpose of this study, as no such tools were in existence.

1. Questionnaire seeking information on the teachers' personal data and particulars of the

NFE centres

2. Attitude of the teachers towards the NFE centres
3. Problems faced by the teachers in the NFE centres—problem checklist
4. Questionnaire seeking information on the students' and their family particulars
5. Academic Achievement Motivation Inventory
6. Telugu Test
7. Arithmetic Test
8. Test in Problem Areas

These tools were constructed, drawing a random sample of 370 participants in Chittoor District in the middle of 1984.

A survey design was used for the investigation and data were collected accordingly

Universe of the Study

As the objective of the study was to assess the performance of the NFE students, it was decided to include in the study only those NFE centres in which the students came to Stage IV. It means the centres must have been in operation since 1980. Only in three blocks, viz. Puttur, Punganur and Karvetinagar, has the NFE programme been implemented since 1980. Each block has 60 NFE centres. As such the total number of NFE centres in the three blocks are 60 x 3. Each NFE centre consists of a minimum of 25 participants. On the whole a total of 4,230 learners are undergoing NFE in the three blocks under study in Chittoor District. These learners formed the universe of the present study.

Sampling Procedure

The study was intended to assess the outcome of the learners who reached the final stage in the NFE centres. It was only in three blocks, viz. Puttur, Punganur and Karvetinagar, that the learners could reach Stage IV. The learners in each centre who reached Stage IV were seven to eight only.

Considering the constraints of time, budget and the number of Stage IV students available in the NFE centres, it was decided to take a sample of 90 NFE centres in three blocks. Thirty centres were drawn by systematic random sampling method from a list of 60 centres prepared separately for each of the three blocks in the district. Five participants were randomly selected from the students who were in Stage IV of the NFE centres. One hundred and fifty Stage IV learners were drawn from among the centres selected in each block. Thus the sample of the learners from the three blocks in the district consisted of 450.

Data Collection

Telugu language test, arithmetic test, test in problem areas and academic achievement motivation inventory were administered in a session of three to three and a half hours for a group of five learners of Stage IV in the NFE centres. An interval of ten minutes was given after the administration of two tests. A good rapport was established with the learners before the commencement of testing. The tests were prepared in such a way that sufficient space was provided against/under each item for writing the responses. The subjects were given as much time as they needed to complete the tests. They were to attempt all the questions.

Forty-five instructors were given the following tools to provide the data required:

1. Questionnaire seeking information on the teachers' personal data and particulars of the NFE centre
2. Questionnaire seeking information on the students' personal and their family particulars
3. Attitude scale (Attitude of the teachers towards NFE)
4. Problem check-list (problems faced by the teachers in NFE centres).

Findings

1. The percentage of dropout of girls is higher than the percentage of dropout of boys in

- the NFE centres, the difference being significant.
2. The proportion of dropout in different blocks is significantly different.
 3. The proportion of dropout in different years is significantly different and the proportion of dropout is gradually decreasing.
 4. There is slight difference between different blocks in time utilisation.
 5. There is no significant difference as far as time utilisation in different years is concerned.
 6. The proportion of coverage in the case of boys is higher than the girls. There are 31 per cent of eligible boys and 37 per cent of eligible girls who are yet to be covered by the NFE programme.
 7. The proportion of coverage significantly varies between different blocks. On the whole only 65 per cent of the clientele are covered and 35 per cent of the clientele are yet to be covered in all the three blocks.
 8. In the Telugu test, the students in the age-group of 9-11 years perform better than those in the age-group of 12-14 years. Girls do better than boys. There is significant difference between the mean performance of (1) the S.C., S.T. and B.C. learners and the B.C. learners exhibit better performance, (2) the S.C., S.T. and O.C. learners and the O.C. learners show better performance. There is no significant relationship between the mean performance of the B.C. and O.C. learners.
 9. In the Arithmetic test, boys perform better than girls. The learners belonging to B.C. and O.C. perform better than the S.C. and S.T. learners whereas the learners belonging to O.C. and B.C. show more or less equal mean performance.
 10. In the problem areas test, the mean differences between the performance of the S.C., S.T. and B.C. learners and the S.C., S.T. and O.C. learners are statistically significant but the mean difference between the performance of the B.C. and O.C. learners is not significant. It is observed that the S.C. and S.T. children's mean achievement score is less than that both the B.C. and O.C. children and the difference between the B.C. and O.C. children's mean achievement scores is negligible.
 11. There is no significant difference between the mean performance scores of the learners having teachers with professional qualifications and teachers without professional qualifications, and the learners having teachers with more and less experience.
 12. There is no association between (1) professional qualifications and (2) experience of teachers and their attitude towards NFE.
 13. There is no significant relationship between the teacher variables (professional qualifications, experience and attitude) and the rate of dropouts in the NFE centres.
 14. There is no relationship between the attitude of teachers towards NFE and time utilisation in the NFE centre.
 15. There is a significant agreement between the teachers working in the three blocks in facing similar problems in the organisation of the NFE centres.

Discussion

The first batch of students who were enrolled in 1979-80 should have come to stage IV after two years, i.e. 1982-83, but they took four years to reach Stage IV. This is almost equal to the time required for completing the lower primary stage. With this, we may infer that the purpose of giving education in the NFE centres in a shorter period (2.5 years) equivalent to formal lower primary education gets defeated.

In order to maintain the strength of the centres, the instructors enroll new learners in place of dropouts. The dropout rate every year seems to be more than the dropout rate in formal primary education. No steps have been taken by the

instructors or supervisors to retain the learners enrolled in the NFE centres. The primary reasons like socio-economic compulsions which forced them to drop out from the formal primary schools were also responsible for compelling them to drop out from the NFE centres too. The purpose of non-formal education is to cater to the educational needs of dropouts and non-starters. As there are huge dropouts in the NFE centres (two-thirds of the children enrolled drop out before they reach Stage IV), NFE may not help universalisation of primary education.

It may be noted that the proportion of dropout rate is dissimilar among the three blocks under study. A positive feature observed in the study is that there is a gradual decrease in the proportion of dropouts

The NFE centres have to work two hours every day irrespective of the holidays, festivals, etc. This kind of rigid rule is not practicable even in a rigid formal system. Then, how is it that in a non-formal system this kind of rigidity is insisted? If the centres can work regularly on usual days, we can feel happy. Usual holidays may be given to the centres also.

The word 'coverage' is used for indicating the enrolment of eligible boys and girls of the age-group 9-14 years. After the existence of the NFE centres for five years, only 69 per cent of eligible boys and 63 per cent of eligible girls are enrolled in NFE centres. There are on the average about one third of the eligible clients who are still to be covered by the NFE centres.

The highest percentage of coverage (73 per cent) and the lowest percentage of coverage (60.5 per cent) is recorded in Karvetinagar and Punganur blocks, respectively. On the whole only 66 per cent of clientele are covered in all the three blocks and 34 per cent have yet to be covered. The stupendous task of universalisation of primary education cannot be achieved unless the NFE centres cover all the eligible children in the age-group 9-14 who are dropouts or non-starters. It is not enough if they enrol them, but they should be able to retain them till the learners complete Stage IV.

Though the mean scores of the tests show that the performance in general in all the tests is high, it may be remembered that the learners who constitute the sample took four years to reach Stage IV. That means, they took a longer time (four years) instead of two years as per the scheme. Some of the learners were dropouts from the formal primary schools. Some of them were relatives of the instructors who persuaded them, somehow, to continue till they reached Stage IV. Most of the pupils who were not sufficiently motivated, dropped out from the NFE centres and such of the learners who were really motivated, are continuing in Stage IV. Their number in each NFE centre, on the average, is only 75. In other words, such learners form the sample. All these factors might help the learners to attain higher performance in the tests.

It is quite natural that those who belonged to the families of high income group, with high literacy index and high academic achievement motivation performed better than the children belonging to low income group, with low literacy index and low academic achievement motivation. It is also natural to observe that the performance level of children belonging to S.C. and S.T. groups is far below the performance level of children belonging to B.C. and O.C. groups. A probable explanation for this can be that the respondents who belonged to higher income groups, with high family literacy index¹ might have more opportunities to get exposed to reading, writing, language, arithmetic and problem areas than the learners belonging to low income groups, with low family literacy index. It may also be said that the higher the level of academic achievement motivation, the higher is the performance in arithmetic.

Though there is no significant relationship between the teachers' experience and professional qualifications and the learners' performance, the mean performance scores of the learners having teachers with professional qualifications and experience are slightly higher than the mean performance scores of the learners having teachers without professional qualifications and experience.

Therefore, it may be said that the experience and professional qualifications of the teachers will have their own favourable impact on the learners.

Conclusion

1. Out of 667 students enrolled in the NFE centres in 1979-80, only 219 students reached Stage IV in 1984. In other words, two-thirds of the children dropped out before they reached Stage IV. This dropout rate in non-formal education is more than the dropout rate of formal school children. There are more dropouts in the NFE centres which are actually meant for dropouts and non-starters.
2. Even one third of the children who are completing Stage IV have taken not less than four years to come to Stage IV. Therefore the principle of completing NFE within two and a half years is not practically working.
3. Every year, as in the case of formal primary schools, the dropout rate of girls is more than boys in that of the NFE centres.
4. The proportion of dropouts is the highest in Karvetinagar block and it is the lowest in Puttur block.
5. The proportion of dropouts is the highest in 1980-81 and it is gradually decreasing year by year.
6. The number of working hours of the centres in a year in different blocks does not vary significantly.
7. Even after their existence for four years, the NFE centres could enrol only two-thirds of eligible clients. On the average, one-third of eligible clients have yet to be covered by the centres.
8. The highest percentage of clientele covered in the NFE centres of Karvetinagar block was 73 and the lowest percentage of clientele covered in the NFE centres of Puttur was 60.5. On the average, only 66 per cent of clientele are covered in NFE centres and 34 per cent have yet to be covered.
9. The mean performance of the learners in the Telugu, arithmetic and problem areas tests is considerably high. This higher academic performance of the learners might be due to their real motivation, longer attendance for four years instead of two years and kinship/friendship with the instructors.
10. Children in the age-group 12-14 performed better than those in the age-group 9-11 in the Telugu, arithmetic and problem areas tests.
11. The boys performed better than the girls in all the tests.
12. The performance of the S.C. and S.T. learners is lower than that of the B.C. and O.C. learners in all the tests.
13. The difference between the performance of the B.C. and O.C. learners in all the tests is not statistically significant. In other words, it is negligible.
14. The tendency that the smaller the family size, the higher the performance of the children of such families in all tests is observed.
15. The children of nuclear families performed better than the children of joint families.
16. The children belonging to high income group, high literacy index and high academic achievement motivation performed better than the children of low income group, low literacy index and low academic achievement motivation.
17. No significant relationship is found between the professional qualifications and experience of the teachers and the performance of the learners.
18. No significant association is observed between the professional qualifications and experience of the teachers and their attitude towards NFE.
19. The teacher variables, namely professional qualifications, experience and attitude towards NFE have no significant effect on the rate of dropouts in the NFE centres.

20. There exists no significant relation between the attitude of the teachers towards NFE and time utilisation
21. The problems faced by the teachers in organising non-formal education centres are more or less similar in all the three blocks.

Implications

1. The non-formal education centres are meant mainly for the dropouts and non-starters of the age-group 9-14. Out of 25 learners admitted to a centre, on the average, only 7.5 learners reach Stage IV. Thus the dropout rate is so high that the very purpose for which the centres are established is getting defeated. Therefore, necessary measures have to be taken to see that there are no dropouts from the NFE centres. The government should not mechanically implement the NFE just to utilize the budgetary provision, but should take precautions to spend money for the fulfilment of the objectives for which the NFE is implemented.

2. The S.C. and S.T. learners in this study

are lagging behind the B.C. and O.C. learners in their performance in all subjects. The instructors have to concentrate on bringing the performance of the S.C. and S.T. learners on par with the learners of other communities.

3. As the centres located in rural and deprived areas are poor in respect of the performance of the learners, special attention should be paid in such areas for the improvement of the performance of the learners.

4. The reasons which were responsible for the dropouts from the formal school remain to be the same for the dropouts from the NFE centres. In contrast to the expectation, the NFE curriculum is not able to retain the learners till the learners complete Stage IV. Therefore, there is urgent need to enrich the curriculum which would help retention of the children once enrolled in the NFE centres.

5. The administration should take measures to make good of the specific areas of deficiencies identified in this study to make the NFE programme more successful.

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Effectiveness and Utilization of Job-oriented Education in Women's Polytechnics

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INVOLVEMENT of educated Indian women belonging to the economically middle and upper strata of society in various fields such as medicine, teaching, science, engineering and technology, politics, law, library science, literature, advertising, journalism and many others, is a phenomenon of the last two to three decades. The post-second world war era particularly brought about rapid and revolutionary changes in the economic conditions, concepts and values and in social and family patterns. These changes provided a greater impetus to the need for employment of women. This, in turn, led to the need for facilities to provide job-oriented education to women.

Thus, women's polytechnics were established to provide job-oriented education to female students. Two such polytechnics, viz Sophia College Basantkumar Somani Polytechnic and Premila Vithaldas Polytechnic were established in Bombay in 1970 and 1976, respectively. Both the institutions offer job-oriented courses recognized by the Directorate of Art and/or Technical Education, Maharashtra State.

A large number of students have received education at these two institutions. The present study was undertaken with a view to evaluating

the impact of this job oriented education on their careers, and the extent to which this job-oriented education is utilized. It was also decided to study the reactions of the employers to the vocational competence of the fresh entrants in the world of work, as the same would facilitate the process of updating the courses.

Objectives

The objectives of the study were as under :

1. To locate the number of gainfully employed diploma-holders of women's polytechnics
2. To study the type of activity pursued by these women, for their gainful employment.
3. To study the reasons for taking higher education in women's polytechnics.
4. To study the reactions of these women towards their job-oriented education in women's polytechnics
5. To know about the wastage in education in women's polytechnics and the reasons for the same.
6. To compare the course-wise proportion of gainfully employed diploma-holders.
7. To study the differences in the type of

employment, according to the field of specialization.

8. To study the reactions of the employers towards the vocational competence of the fresh entrants in the world of work.
9. To locate the changes expected by the students and the prospective employers in the syllabi

Scope and Limitations of the Study

1. The present study covers the students of two women's polytechnics, out of four in Bombay. They are Sophia College Basantkumar Somani Polytechnic and Premlila Vithaldas Polytechnic.
2. The students successfully completing the courses during the period 1981-1983, are covered in the study.
3. These institutions offer courses recognised by the Directorate of Technical Education and Directorate of Art Education, along with some institutional courses. The present study is restricted to the courses recognized by the Directorates of Technical and Art Education
4. The students offering the following courses at Premlila Vithaldas Polytechnic are included in the study.
 - (a) Diploma in Commercial and Secretarial Practice
 - (b) Diploma in Dressmaking and Fashion Co-ordination
 - (c) Diploma in Food Technology
 - (d) Diploma in Medical Technology (Clinical Pathology and Microbiology)
 - (e) Diploma in Medical Technology (Pharmacy)
5. The students of Sophia College Basantkumar Somani Polytechnic included in the study have offered the following courses :
 - (a) Diploma in Social Communication Media
 - (b) Diploma in Travel and Tourism

(c) Diploma in Textile Designing.

(d) Diploma in Applied Art

Procedure

It was decided to select 50 per cent of the students per course per year, by the random method of sampling.

A preliminary data sheet was sent to 683 students (the entire population), in order to establish contact with and to locate, the number of gainfully employed at present, and employed in the past but not at present. Responses were received from 358 (52.41%) students

Out of the 358 respondents, 85.47 per cent have been gainfully employed either at present or in the past and 14.53 per cent have never been gainfully employed.

The questionnaire was sent to all the 358 respondents and replies were received from 191 students (53.35%). Thus the findings of the present study are based on the responses of 27.96 per cent of the total population

Ten per cent of the working women and their first employers were also interviewed. The purpose of the interview was to know about the initial difficulties experienced by these women, the opinion of the employers regarding the vocational competence of the fresh entrants and the suggestions of both for changes in the courses.

Findings

1. Reasons for Joining Women's Polytechnics

The reasons spelled out by more than ten per cent of these students are fascination for a new course, desire to acquire training in order to earn, desire to acquire vocational training, desire to join a short-term course and desire to use free time in a constructive manner. The other major reasons include desire of the parents, interest in the subject, desire to join women's institution

Course-wise comparison of the reasons for joining women's polytechnics shows that 'interest in the subject' is an important reason assigned

by the students of Social Communication Media, Textile Designing, Applied Art and Dressmaking and Fashion Co-ordination Courses.

2 Reactions towards the Course

Reactions towards the course with respect to duration, expenditure, timings, course content (theory, practicals, integration of theory and practicals), preparation for entry into the world of work, scope for discussing and solving individual difficulties and utility for earning were sought. The respondents were expected to rate their reactions on a five-point scale ranging from extremely favourable to very unfavourable.

The five most favourable reactions of the students are towards (i) expenditure, preparation for entry into the world of work, (ii) amount of theory, (iii) scope for discussing and solving individual difficulties, (iv) integration of theory and practicals, and (v) timings. Their least favourable reactions are towards (i) types of practicals, (ii) sufficiency of practice for practicals, (iii) subjects and topics in theory, (iv) size of the group for practicals, and (v) duration of the course.

However, an average score ranging from 2.39 to 3.02 for each of the aspects covered indicates that the students do not have very unfavourable reactions towards any aspect of the course pursued by them.

3 Reactions towards the Effectiveness of the Course

Opinion regarding the effectiveness of the course for smooth entry into the world of work was sought. The points covered included vocational/professional knowledge, general knowledge, vocational/professional skill, business skill, preparation for entry into the world of work, application of knowledge in day-to-day work, and dealings with human beings.

They were expected to express their opinions by ratings ranging from fully useful, to useful to a negligible extent.

The students feel that they were best equipped for business skills, preparation for entry into the

world of work and dealings with human beings. They feel less happy with their competence in vocational/professional knowledge, practical application of knowledge in day-to-day work, and vocational/professional skill.

However, the average scores assigned to different aspects range from 2.63 to 3.7, which indicates that the students were sufficiently equipped for their respective careers.

4 Involvement in Financially Rewarding Activity

It is found that 74.35 per cent of these students are engaged in financially rewarding activity at present, 14.14 per cent were involved in such activity in the past, and 11.52 per cent have never been involved in any such pursuit.

All the students of Diploma in Applied Art have been engaged in financially rewarding activity either at present or in the past. The percentage of those involved in financially rewarding activity at present ranges between 53.85 per cent and 90 per cent, the highest being those with Diploma in Commercial and Secretarial Practice (90 per cent) and the lowest being those with Diploma in Food Technology (53.85 per cent).

So far as the percentage of those who were gainfully employed in the past but not at present is concerned, the highest percentage (28.57 per cent) is with Diploma in Travel and Tourism and the lowest (6.45 per cent) is with Diploma in Pharmacy.

Amongst those who have never been engaged in financially rewarding activity, the highest percentage (38.46 per cent) is of those with Diploma in Food Technology and the lowest is of those with Diploma in Travel and Tourism (3.57 per cent).

5. Reasons for Involvement in Financially Rewarding Activity

The three most important reasons assigned are desire to utilize knowledge, desire to become economically independent and desire to satisfy the urge for creative activity. The three least important

reasons assigned are desire to attain status in the family, fulfilment of the desire of family members, and desire to enhance marriage prospects.

6. *Type of Financially Rewarding Activity*

It is observed that 13.61 per cent of these females are engaged in more than one type of financially rewarding activity. The highest percentage of these ladies are employed full-time (46.08 per cent), part-time (16.13 per cent), followed by those involved in freelance work (6.91 per cent), private tuitions and conducting coaching classes (6.45 per cent), and private practice (4.61 per cent).

It can be concluded from the above data that majority of females taking education at women's polytechnics seek employment, either full-time or part-time. A comparatively smaller proportion (27.19 per cent) of them is involved in freelance work, contractual work, private practice, business, production, sales, etc.

Course-wise comparison indicates that majority of those doing freelance work are with Diploma in Textile Designing, Diploma in Applied Art, and Diploma in Social Communication Media. Those having private practice are with Diploma in Dressmaking and Fashion Co-ordination, Diploma in Clinical Pathology and Microbiology, Diploma in Textile Designing, and Diploma in Commercial and Secretarial Practice.

7. *Experience of Self-employed Women*

All those involved in any financially rewarding activity, expecting full-time or part-time employment, are considered as self-employed. They comprise of 27.19 per cent of the respondents. The information regarding the experiences of these self-employed women includes (i) type of activity pursued for self-employment; (ii) duration of involvement in the activity; (iii) time devoted, (iv) monthly income, (v) reasons for selecting the activity; (vi) facilities for pursuing the activity, (vii) satisfaction in the activity and contributing factors, (viii) dissatisfaction and frustration in the activity and contributing factors; (ix) success in

the activity and related factors; and (x) desire to continue the activity.

(i) *Type of activity pursued for self-employment* It is observed that 21.43 per cent of these women give private tuitions. They are with Diploma in Travel and Tourism, Textile Designing, Commercial and Secretarial Practice and Food Technology.

Those with Diploma in Social Communication Media are involved in freelance work, related to advertising, copy writing, proof reading. One Diploma holder in Travel and Tourism is doing modelling. Those with Diploma in Textile Designing prepare designs, make fancy decorative articles, conduct hobby classes for children, hold exhibitions of garments. Those with Diploma in Applied Art prepare designs and are involved in freelance typography work. Commercial and Secretarial Practice diploma-holders undertake typing and give tuitions. Those with Diploma in Dressmaking and Fashion Co-ordination are involved in designing and production of garments. One diploma-holder in Clinical Pathology and Microbiology owns a pathological laboratory.

However, the number involved in all the activities, except private tuitions, is very negligible.

(ii) *Duration of involvement in the activity* : Since the sample comprises of the students who passed their final examination in 1981-83, the duration of their involvement in financially rewarding activity would range from six months to four years.

Majority of them are involved in their respective activities for a duration of one to two years, followed by those for less than five months and more than two years and six to eleven months.

(iii) *Time devoted* : The time devoted for these activities ranges from less than two hours per day to more than eight hours per day. The highest percentage of these women devote two to four hours per day. This is followed by those devoting five to seven hours and eight and more hours per day.

(iv) *Monthly income* : The approximate monthly income from these pursuits ranges between less than Rs. 200 to Rs. 1,500 and more. The monthly income of the highest percentage of these women is in the range of Rs. 401 to Rs. 600 (14.29 per cent). This is followed by 11.91 per cent, 9.52 per cent, 7.14 per cent and 4.76 per cent with monthly income in the range of Rs. 201-400, Rs.1500 and more and less than Rs. 200, Rs 801-Rs.1,000 and Rs. 601-Rs.800, respectively.

(v) *Reasons for selecting the activity.* The main reasons assigned for selected a particular activity for self-employment are interest in the activity, desire to use knowledge, desire to be economically independent, desire to utilize time in a fruitful activity.

(vi) *Facilities* . The Chief facilities for self-employment are space at home, no need to depend on others for work, and support and co-operation from family members and people in the field.

(vii) *Satisfaction in the activity and contributing factors* : 57.14 per cent of these women are satisfied with the activity selected for self-employment. The chief factors contributing to their satisfaction are appreciation by others, scope to develop contacts and meet people, scope to develop hobbies and good financial return.

(viii) *Dissatisfaction and frustration in the activity and contributing factors* : 11.9 per cent of these women are dissatisfied and feel frustrated. They feel so because of high prices of raw material, heavy competition and lower income.

(ix) *Success in the activity and related factors:* It is seen that 4.76 per cent of these women feel that they are extremely successful in their pursuits. This is followed by 19.05 per cent, 40.48 per cent and 4.76 per cent, who feel that they are very successful, reasonably successful and not very happy with their success, respectively.

The factors contributing to their success in the pursued activity include personal qualities such as hardwork, sincerity, punctuality, positive approach to work, and other factors such as good

contacts, good working relationships, favourable opportunities, etc. However, the number of women stating each of these factors is very small, viz. one or two.

28.57 per cent of these women have given the following factors as hindering their success: poor working conditions, lack of space, lack of scope for expansion, labour problems, competition and household responsibilities.

(x) *Desire to continue the activity* : It is observed that 64.29 per cent of these women would like to continue the activity, and 7.14 per cent would not like to continue the activity. The main reasons for their desire to continue the activity are work pleasure, opportunity to learn, scope for earning, scope for creative work, good response, and scope for work as per convenience.

8. *Experience of Employed Women*

The highest proportion of these women (24.85 per cent) had to wait for a period of one to three months before getting their first jobs. 12.43 per cent, 9.47 per cent, 8.24 per cent and 7.69 per cent of them had to wait for four to six months, ten to 12 months, less than one month, and more than one year, respectively. On the other hand, 8.88 per cent of them got their first jobs immediately on passing their final examination.

(i) *Designation* . Amongst the diploma-holders in Social Communication Media, 30.77 per cent are engaged in advertising firms, 24.08 per cent in newspapers and the remaining in travel agencies, film production, doordarshan kendras and business organizations. Their designations include assistant director, assistant editor, assistant public relations officer, travel assistant, writer, reporter, journalist, junior copy-writer, correspondent, production assistant and accounts executive.

Among the diploma-holders in Travel and Tourism, 52.94 per cent are employed in travel agencies, 11.76 per cent in hotels and the remaining in airlines and business organizations. Their designations include secretary, travel supervisor, tour executive, passage co-ordinator, sales officer,

executive sales liaison, etc.

Amongst those with diploma in Textile Designing, 62.5 per cent are employed in textile mills and the remaining in garment manufacturing companies and educational institutions. They are employed as textile designer, artist and teacher.

Those with diploma in Applied Art are employed in advertising firms (71.43 per cent) and in art companies. They are employed as artists and visualisers.

Diploma-holders in Commercial and Secretarial Practice are employed in business organizations (81.25 per cent) and travel agencies, (12.5 per cent). They are appointed as steno-typist (62.5 per cent), telephone operator (12.5 per cent) and receptionist, telex operator, typist-cum-assistant, etc.

Those with diploma in Dressmaking and Fashion Co-ordination are employed in garment manufacturing companies (42.86 per cent), boutiques (28.57 per cent) and business organizations. They are appointed as designers and fashion co-ordinator.

Diploma-holders in Food Technology are employed in factories (66.67 per cent) and business organizations (33.33 per cent). Their designations are production assistant and assistant trainee.

Those with diploma in Clinical Pathology and Microbiology are employed in laboratories (47.37 per cent), hospitals (15.79 per cent), nursing homes and clinics (10.53 per cent each) and research organizations. 84.21 per cent of them are employed as laboratory technicians.

Amongst those with diploma in Pharmacy, 37.5 per cent are employed in hospitals, 29.17 per cent in the central government health scheme, 20.83 per cent in chemist shops, and the remaining in laboratories and banks. Majority of them are employed as pharmacists (91.67 per cent). Some of them are also employed as medical representatives.

It can be concluded from the above that most of these women are involved in the work for which

they received education at the women's polytechnics.

(ii) *Duration* : The duration of their present employment ranges between less than six months to more than two years. 30.58 per cent have been employed in their present positions since more than two years. This is followed by 28.93 per cent, 14.05 per cent and 6.61 per cent who have been employed for one to two years, seven to 12 months and less than six months, respectively.

(iii) *Type of appointment* : Majority of these women are employed in permanent positions (56.67 per cent), 21.67 per cent on temporary basis, 1.67 per cent on semi-permanent basis and 83 per cent are on probation.

(iv) *Type of employment and income* : A large proportion (68.6 per cent) of these women are employed full-time and 31.4 per cent of them are employed part-time.

The monthly income of those in full-time employment ranges between Rs 500.00 or more than Rs 2,000.00, with 42.17 per cent and 38.55 per cent in the income range of Rs 501.00 to Rs 1,000.00 and Rs 1,001.00 to Rs 1,500.00, respectively. 9.63 per cent have monthly income in the range of Rs 1,501.00 to more than Rs 2,000.00.

On the other hand, the income of 42.1 per cent of those in part-time employment is less than Rs 500.00 per month and that of 36.84 per cent is in the range of Rs 1,001.00 to Rs 1,500.00. This shows that nearly the same percentage of those employed on full-time as well as part-time basis have monthly income of Rs 1,001.00 to Rs 1,500.00 which indicates that the income of those employed on part-time basis is better than that of those employed on full-time basis.

(v) *Additional income generating work* : It is seen that 12.43 per cent of these women are also involved in some activity for additional income over and above their regular employment.

Their major activity is giving private tuitions (28.57 per cent). The others are working as beauticians, steno-typists, pharmacists, and sales

representatives (14.76 per cent each).

The highest proportion devotes three hours per day (23.81 per cent) for such work, 19.05 per cent devote two hours, 9.52 per cent devote four hours and 14.28 per cent devote time as per their convenience.

Their average additional monthly income ranges from Rs 100.00 to more than Rs 300.00. 38.10 per cent of them have additional income of more than Rs 300.00 per month.

9 Previous Employment

It is found that the present employment of 34.03 per cent of these women is not their first employment. The data regarding their first employment were analysed with a view to getting a picture about their designation, income, etc. in their first jobs.

On comparing the data regarding the first and the present employment of these women, it is observed that there is not much difference in the types of organizations of employment and the designations of these women. The striking difference is that nearly eight per cent of them were initially appointed as trainees and were later absorbed in regular employment.

10. Training Prior to Employment

It is observed that 37.41 per cent of the employed women had to undergo some training prior to their being absorbed in employment.

The duration of the training period was more than four months in case of 41.82 per cent, two to three months in case of 36.36 per cent, up to one month in case of 14.55 per cent and one year in case of 7.27 per cent of these women.

32.73 per cent were exposed to all the departments in the organization, whereas the others were trained for their respective specific functions.

27.27 per cent received training in the same organization, where they got their first jobs, whereas 82.73 per cent received training in other organizations.

38.18 per cent of them did not receive any

stipend during the period of training 32.73 per cent, 16.36 per cent and 1.82 per cent received less than Rs 500.00, Rs 501.00 to Rs 1,000.00 and Rs 1,001.00 to 1,500.00, respectively, during the period of training.

11 Reasons for Discontinuing Financially Rewarding Activity

As stated earlier, 14.14 per cent of these women were involved in financially rewarding activity in the past, but have discontinued the same. The major reasons for the same are domestic and social responsibilities, unfavourable working conditions, lack of scope for advancement, objection of the family members, activity not suited to personal needs and temperament and dissatisfaction with the financial returns.

12 Reasons for Non-involvement in Financially Rewarding Activity

As stated earlier, 11.52 per cent of these women have never been involved in any financially rewarding activity. The major reasons for the same are lack of need to earn, lack of opportunities, domestic and social responsibilities and involvement in further studies.

13 Mother-tongue and Employment

Comparison of different language groups involved in different types of financially rewarding activities indicates that a higher percentage of Hindi-speaking women are involved in contractual and freelance work. The proportion of Gujarati-, Marathi- and Hindi-speaking women involved in private practice is nearly the same.

It is observed that amongst the women pursuing additional income-generating activities over and above their full-time employment, the highest percentage is that of Gujarati-speaking women. This is followed by Marathi-speaking women. None of the Hindi-, Punjabi- and Konkani-speaking women pursue any such additional activity.

The Gujarati-speaking women who were gainfully employed in the past have discontinued the same because of domestic and social responsibilities, objection of the family members,

activity being unsuited to their personal needs and temperament, and employment being temporary.

The Marathi and Punjabi-speaking women have done so because of domestic and social responsibilities and dissatisfaction with the financial returns.

The Hindi-speaking women discontinued involvement in financially rewarding activities because of domestic responsibilities, dissatisfaction with the working conditions, lack of scope for advancement and because the activity was not suited to their personal needs and temperament.

Amongst those who have never been involved in financially rewarding activity, the main reasons applicable to Gujarati, Punjabi and Hindi-speaking women are lack of need to earn and objection of the family members, and in case of Marathi-speaking women, it is lack of opportunities.

14. *Marital Status and Employment*

It is observed that 80.56 per cent of the unmarried women are gainfully employed at present, 9.72 per cent were gainfully employed in the past and 9.72 per cent have never been gainfully employed. The corresponding percentages for the married women are 53.49 per cent, 30.23 per cent and 16.28 per cent, respectively.

The gainfully employed unmarried as well as married women (52.53 per cent) hold full-time jobs, part-time jobs, give private tuitions, are involved in freelance work, and have private practice. The percentage of those in business, etc. is very small.

Amongst those involved in additional income-generating activities, 80.95 per cent are unmarried and 19.05 per cent are married.

The reasons for discontinuation of involvement in financially rewarding activities as applicable to unmarried women are dissatisfaction with working conditions, lack of scope for advancement, activity unsuited to their personal needs and temperament, dissatisfaction with

financial returns, objection of family members and domestic and social responsibilities.

On the other hand, married women have done so because of domestic and social responsibilities, objection of family members, dissatisfaction with working conditions, and dissatisfaction with financial returns.

The main reasons for never involving themselves in financially rewarding activities are nearly the same in case of both the unmarried and the married women. They are lack of need to earn, lack of opportunities, domestic and social responsibilities and desire to study further.

Suggestions for the Improvement of the Courses

The course-wise suggestions given by the students and the first employers of the students are given below:

Diploma in Social Communication Media

1. The duration of the course should be extended by four to 12 months.
2. Specialization should be introduced and advertising, film technique, photography, article, planning and world history of journalism should be added to the theory.
3. Number of practicals in each subject should be increased and they should be individualised and more intensive.
4. Internship of two months' duration should be included.

Diploma in Travel and Tourism

1. The duration of the course should be curtailed by three to six months. It is surprising, how a professional course of one academic year can be curtailed by three to six months.
2. Greater emphasis should be laid on office administration and management, ticketing and fare construction. Subjects like use of computers and telex and foreign languages should be added.
3. Cultural history and history of architecture should be deleted from the course. It appears

that the students have failed to understand the importance of the study of history, religions and philosophy of a country in travel and tourism.

4. Intensive practicals should be arranged for ticketing and fare construction. There should be greater emphasis on photography and field trips.
5. Internship of one to five months should be made an integral part of the course and the students should be placed in different departments by rotation.

Diploma in Textile Designing

1. The additions to the theory include designing for weaving and printing, current trends in designing, traditional embroidery and business skills. The subjects to be deleted include history of art and designing for commercial use.
2. Practical in designing for weaving, bleaching, sizing and printing should be added.
3. Internship comprising of training in textile mills or printing units should be introduced. The duration of the internship should be four to six months.
4. The course should be converted into a degree course
5. Designing of handicrafts and handloom material should be included in the course.
6. Mushroom growth of institutions offering their own courses should be checked to ensure maintenance of standards.

Diploma in Applied Art

1. The duration of the course should be curtailed by one year.
2. Subjects such as practical advertising and printing, production and market research and working of an advertising agency should be added. History of art should be deleted from theory.
3. Practical in photography, oil painting, cut-and-paste work and art-work should be

added. Students should be encouraged to do creative thinking.

4. Visits to printing presses should be arranged.
5. Internship of six months' duration should be introduced and students should be placed in different departments by rotation.

Diploma in Commercial and Secretarial Practice

1. Courses to be added to the theory include business management, organization of commerce, telex operation and commercial import and export. Accounts should be taught in all the four semesters.
2. Additions to practicals include those in banking, accountancy, telephone and telex operation. More practice in dictation-taking has also been suggested.
3. The duration of the internship should be extended by one to four months and students should be familiarized with all routine office work during this period.
4. Students should be given a separate certificate for speed in typing and shorthand.
5. Students should be exposed to varied types of drafts in commercial correspondence to avoid stereotype drafting. They should also be familiarized with the use of computers in business and commerce.

Diploma in Dressmaking and Fashion Co-ordination

1. Subjects such as commercial import and export, history of costume and fashion illustration, designing of children and men's garments, industrial drafting, cutting, sewing, sizing, grading and designing should be added. Specification sheets should be taught in greater details.
2. Practical in draping, colour-system, fashion-designing and sketching of designs should be added and the number of assignments and practicals should be increased
3. Students should be placed in factories with latest machinery during the period of internship.

- 4 The period of internship be extended to provide experience in varied types of organizations.

Diploma in Food Technology

1. The suggested additions to the theory include food engineering, bio-chemistry, packaging and business management. Courses having a little relevance to food technology have also been suggested for additions. These include catering and hotel managements, dietetics and foods and nutrition. Physics should be deleted.
2. More practice should be provided in manufacturing on a large scale and of confectionery. There should be more individual practicals.
3. The duration of internship should be extended to six months and students should be provided experience in canning, testing of flavours and colours and manufacturing of extruded foods and soya products.
- 4 The course should be widely publicized in the world of work and the society at large.

Diploma in Clinical Pathology and Microbiology

1. Subjects such as hematology, cytology, oncology, immunology, automation in testing, latest testing techniques and business skills should be added to theory.

Having failed to understand the importance of the study of book-keeping, accounts, histopathology, English literature, and personality development for professional and allround personal development, students have suggested their deletion from theory.

2. The number of practicals should be increased, and more so for urine and stool tests. Natural samples should be provided for tests. Care of equipment should be emphasized and students should be permitted to handle the equipment for electrophoresis.
3. The duration of internship should be extended by six months. Students should be placed in well-equipped private laboratories

and hospitals. They should have sufficient practice in different types of tests.

4. Refresher courses should be arranged from time to time to update the knowledge of the alumni.
5. The course should be converted into a degree course.

Diploma in Pharmacy

1. Subjects to be added to theory include pharmacology, first-aid and nursing, hospital and clinical pharmacy, anatomy, physiology, cosmetology, book-keeping, accountancy, trade-names of drugs, latest government rules, injections, dressings, effects of drugs and medicinal value of herbs.

Pharmacognosy and physics should be deleted from theory.

2. Preparation of mixtures and dispensing of drugs should be added to practicals and practicals in dissection of herbs should be deleted.
3. The duration of internship should be extended by six months and students should be placed in medical stores, hospitals and factories during this period.
4. Students should be taught about store-keeping, indenting, trade names of drugs, and should have preliminary knowledge of manufacturing of drugs.

Conclusions

1. A considerably large proportion of diploma-holders of women's polytechnics are gainfully employed. Wastage is comparatively less and the chief reasons for the same are domestic and social responsibilities and lack of need to earn.
2. A large proportion of gainfully employed women are employed either on full-time or part-time basis. Even amongst the diploma-holders studying courses that would equip them for private practice, own business, freelance work, etc. the proportion involved in such activities is very small.

3. As compared with the diploma-holders in Food Technology, a significantly higher percentage of diploma-holders in Travel and Tourism (significant at 0.01 level), Applied Art, Social Communication Media, Medical Laboratory Technology (each significant at 0.05 level), have been gainfully employed.
- 4 The reactions of the students towards the effectiveness and utility of the courses pursued by them are moderately favourable.
5. The students pursue studies at women's polytechnics with a view to equipping themselves for a career by acquiring vocational training in a short period
- 6 The employers of the fresh entrants are on the whole satisfied with their vocational competence.

Understanding Social Studies

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THE most recent view in the field of evaluation is that understanding is the most significant outcome of learning. If one learns with understanding, his learning would become meaningful, economical and permanent. Learning with understanding results in functional value. Therefore, emphasis now is on teaching and testing pupils for understanding.

However, in India, teaching and testing for understanding social studies has not yet received as much attention as it should. In classrooms much emphasis is laid upon learning and reciting facts of history, geography and civics—names and location of cities, rivers and mountains, facts of history, duties and powers of governmental agencies and the like. Cause and effect relationships are seldom pointed out. The achievement tests in social studies usually set by teachers in schools are essay type and short answer type and test children's factual knowledge of the subject and speed of thinking and writing. They hardly measure pupils' understanding of social studies in an integrated fashion. Hence the investigator felt that it was justifiable to construct a test for measuring understanding of social studies without the thwarting element of speed.

There is a common belief that boys have

better understanding in social studies than girls, and that the latter learn mostly by memorising and boys use more reasoning and critical thinking. The investigator was curious to find out if there is any truth in this belief. Hence, the present study was taken.

Objectives of the Study

1. To construct a test of understanding in social studies for measuring pupils' understanding.
2. To compare the understanding of boys and girls in social studies.
3. To compare the scores of each objective of understanding social studies.

Hypothesis

In order to realize the second objective, the following null hypothesis was formulated: "There is no significant difference in the understanding of boys and girls in social studies".

Delimitation

For the measurement of understanding in social studies the investigator selected only Class VIII, because the maximum syllabus of social studies at the elementary stage is covered up to

Class VIII. The study was confined to six schools of Delhi—three boys' and three girls' schools. A sample of 200 students was selected.

In this study the investigator constructed a theoretical test to measure pupils' understanding in social studies because measuring understanding in the application field was difficult due to shortage of resources.

Procedure for Developing Understanding Test

To achieve the first objective of the study, an understanding test in social studies was developed, the procedure of which was as follows:

I Preparation of Test Items

For the preparation of the test items, the investigator followed the following objectives of understanding given in the 45th Year Book of National Society for the Study of Education, Part I (1946):

1. Understanding Special Vocabulary of Social Studies
2. Understanding Chronological Relationships.
3. Understanding Maps
4. Knowing important concepts, generalizations and findings as a pre-requisite to reaching valid conclusions about social problems.
5. Locating, selecting, organizing and evaluating the evidences.
6. Applying social facts, generalizations and value principles to new problems.

For the subject matter, the syllabus prescribed by the Department of Education, Delhi Administration, was consulted. Besides, opinion of experts and experienced teachers of social studies was purposefully gathered for making the items consistent to the standard of the pupils. In all, 90 items were included in the preliminary draft.

Out of the various types of forms prescribed for making of the items, multiple choice type, matching type, simple recall type and true-false type were chosen.

II. Tryout and Scoring Scheme

The test was tried out on 100 boys and 100 girls of Class V. A few oral directions were given in order to facilitate reasonable ease and accuracy in answering the test items. The scoring was done on the basis of one score for one correct item. The multiple choice and true-false items were subjected to the correction formula as suggested by Davis. The formula runs as:

$$P = R - \frac{W}{K-1}$$

When R = The number of testees that answer the item correctly.

W = The number of testees that answer the item incorrectly.

K = The number of choices in the items.

The total understanding score for each pupil can be obtained by summing the value of each item of the test

III. Item Analysis

The test books of 200 respondents were scored and arranged in the ascending orders, based on the total scores obtained by the respondents. The answer books of only 27 per cent of lower and 27 per cent of upper groups were taken to form the upper and lower groups. Afterwards a table was prepared for indicating the frequency of correct, incorrect responses, items left out and percentage of correct responses of these two groups. In order to avoid complex computational operations, an Item Analysis Chart of F.B. Davis (1949) was consulted to find out the discriminatory power, difficulty value and internal consistency (r-value) of each item.

IV. Final Test

All the items which had difficulty value ranging between 25 to 75 and discriminating power not less than 10 were retained. In this way 70 items were selected for the final test. For getting a comprehensive idea of discriminating power (DP), difficulty value (DV) and r-values of the selected items, mean and SD were calculated

which are shown in Table 1.

TABLE 1
DP, DV and 'r' Values of the Final Test

Criteria	DV	DP	'r'
Mean	49.07	28.21	.4179
SD	11.5	13	.17

It is clear from the table that the mean difficulty value is 49.07 and the standard deviation 11.5 which show that the distribution of the difficulty value is normal, because it is near the normal mean difficulty value that is 50 (Flanagan, 1939). The obtained mean discriminating power is 28.21 which is quite high because for a good test, discriminating power should be more than 20 as suggested by Davis (1949). For good results the Mean 'r' value should be near about .5. The obtained value was .4179 which shows that the test had high internal consistency.

The normalcy of the test was tested by applying Chi-square test. The value of Chi-square was 14.578 for 9 df falls to about 90 per cent confidence. It shows that the scores on the items selected for the final test were normally distributed.

V. Reliability

For determining the reliability of the test, split half method was used. The scores on odd and even items were taken separately on the total sample. The product moment coefficient of correlation was computed between the scores on odd and even items. The reliability coefficient thus computed was corrected, applying the Spearman Brown prophecy formula (Garrett and Woodworth, 1966). The corrected reliability coefficient for the whole test was .84 which proves that the test is highly reliable.

VI. Validity

In order to make the test valid, the test constructor followed the advice of Green and others (1942) and took all care to see that the test had curricular and statistical validity. For maintaining curricular validity the test constructor did broad analysis of the social studies syllabus

textbooks, which are generally used by the teachers and pupils. She studied the objectives of measurement of understanding in Social Studies which were recommended by the 45th Year Book of National Society for the Study of Education. She analysed the teachers' final examination papers and consulted experienced teachers and experts in this field.

The test constructor got the statistical validity by two methods: (i) internal criteria, and (ii) external criteria. Proper care was taken at the time of constructing items to maintain validity, following internal criteria. The high discriminating power, suitable difficulty value and significant internal consistency indicate that the test has highly valid items.

For obtaining validity of the test in the light of external criteria, the test scores were correlated with the achievement marks of the second terminal examination. Computed Value of Pearson 'r' and Standard Error are provided in Table 2.

TABLE 2
Coefficient of Correlation, its Level of Significance and Standard Errors

df	r	Minimum 'r' Required at Different Levels		SE
		.05 Level	.01 Level	
198	.56	138	181	.048

It is clear from the table that 'r' value (.56) is significant even at .01 level, thereby indicating that the test is highly valid. The obtained SE value shows that there is high reliability of 'r' value.

Comparison Between Boys and Girls' Scores in Understanding Social Studies: Macro Analysis

To test the significance of difference between the mean scores of boys and girls, t-test was applied, the result of which is shown in Table 3.

The table shows that the difference between boys and girls mean score is only .90 and t-value falls short of the tabled value of 1.98 and is, therefore, not significant even at .05 level. This shows that the observed difference in the mean

understanding scores of boys and girls may be attributed to chance. Hence, the null hypothesis that there is no significant difference between the understanding of boys and girls in social studies is accepted.

TABLE 3
Significance of Difference Between Boys and Girls'
Mean Scores of Understanding Social Studies

Group	Mean	SD	N	SE	T	Table of t-value at 05 Level
Boys	33.55	11.00	100	1.1	604	1.98
Girls	32.65	10.10	100	1.01		

Micro Analysis of Scores

The investigator was interested to make a comparative study of the strength and weakness of the pupils in different objectives of understanding social studies as indicated by the scores they secured. She calculated the mean score of the whole group in each objective separately. Because each objective did not have an equal number of questions, she equated the means scores by calculating them out of hundred. The results are shown in Table 4.

TABLE 4
Mean Score in Each Objective of Understanding
Social Studies

Objectives of Understanding	Mean Score	Number of Test Items
1 Understanding of Special Vocabulary	44.74	19
2 Understanding of Chronological Relationships	44.73	11
3 Understanding of Maps	23.23	9
4 Understanding of Important Concepts and Generalizations	44.28	9
5 Understanding of Locating,		

Selecting, Organising and Evaluating Evidence	53.15	17
6. Applying Social Facts and Value Principles to New Problems	80.4	5

It is obvious from the above table that the mean score in understanding of applying social facts and value principles to new situations is 80.4 which is very high in comparison to the mean score of the other objectives. It shows that the pupils are fully aware of the right value principles and the right social facts. Further, the students have above average understanding in selecting, organizing and evaluating evidence but they are just average in the understanding of vocabulary, chronological relationships and generalizations. Their performance in the understanding of maps is very low. These results show that while teaching social studies to students, map reading, special vocabulary, chronological relationships and generalization of concepts are neglected by the teachers.

Suggestions for Teachers

The teachers should teach map reading specifically and concretely. Real maps, outline maps and hypothetical maps in social studies should be used.

For developing understanding of chronological relationships, the teachers should relate one historical date-event to another.

In the weekly and monthly tests, the teachers should give questions which demand understanding and cause and effect relationships. They should have a clear concept of understanding so that they can teach pupils for understanding.

Socio-historical Perspective of the Relevance of Modern Indian Universities

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UNIVERSITIES have an obligation to society as its main agency for the creation and dissemination of knowledge and as the custodian of its values. However, they can discharge this obligation satisfactorily only if they continue to enjoy complete autonomy in evolving their own standards and adoptive methods which they consider the best for the purpose' (Shah, 1964). Though contrary views to this concept of university have also been presented by many historians, they assert that universities are medieval reactions. But apart from historicity, the objective review of the need of today's university system on world horizon reveals that education as a purpose and a process both is properly determined by the universities because they are at the apex of the learning cone

No doubt, the best education has been imparted through universities where they have been antonomous and the worst where they have been subordinated to any alien force, if universities have the potency to solve the social crises and provide viable solutions, only then do these have 'relevance' to exist, otherwise there is no need of allowing their perpetuity.

Superior portals of knowledge have been pursued inside and outside of university campuses

In the growing complexity of world society, knowledge has become the property of formal institutions and in this scheme universities are on the top. Pioneer discoveries have scarcely been the product of any formal university. But in the contemporary social set-up the knowledge-seeking individuals were certainly related to some sort of institution. Now in most of the developed and developing countries, the various institutions are taking the shape of formal insututions. The philosophy of planned development is causing rapid 'formalisation of institutions'. In the context of growing 'formalisation', the 'relevance' is quickly shifting its criteria. Instantaneous analyses may benefit to renovate the system or radically innovate the measures. Modern universities throughout the world are now thought to be more responsible than ever in successful resolution and solution of contextual societal problems.

Emergence of Modern Universities in India

If an investigative analysis about the reasons behind the establishment of Indian universities is made, many factors will emerge. Academic analysis indicates the 'the establishment of a university system in 1857 proceeded from the view that collegiate education had failed India's

needs' (Eisemon, 1984). Besides, the other colonial motif behind the establishment of universities in India around the mid-nineteenth century had as its object 'the development of an educated class whose social outlook had been shaped by exposure to western and oriental intellectual traditions' (Eisemon, 1984). Macaulay's desire was to create "a class of persons Indian in blood and colour but English in taste, in opinion, in morals and intellect" (Tickoo, 1980). Eisemon rightly describes: "only in the mid-nineteenth century did collegiate education acquire explicitly 'bureaucratic' purposes associated with providing training for colonial employment".

A brief chronological account of the evolution of modern Indian universities requires an historical review. If we start from 1857 when three universities on Western lines were founded in Bombay, Calcutta and Madras, we find that the history of modern Indian universities is not older than a century and quarter again. The relevant part of 127 years of modern universities (1857-1934) witnessed hundred years more significant in the history of higher education from 1882-Commission to the present decade. Up to 1882, only four universities could come into being. The University at Lahore was the fourth and after 1882-Commission the University of Allahabad was the first to come into existence. Thus, around 1885 only 4-5 universities were in existence, and in 1984-85 their number reached about 124-125 (including the institutes of higher education). Statistically, more than one university was instituted every year.

Keay and Karve have rightly mentioned that till Sir Michael Sadler's Commission, only five universities were there but their number raised to fourteen in 1922. It implies that during three years, nine universities were installed. This was a sudden spurt in the history of evolution of institutions of higher education in India. Before India's independence there were only 19 universities which again shows that during 25 years (1922-1947), only five universities were built. The number of universities again rose to 27 in 1950-51 and 54 in 1962. Numerically, there

was no any systematic trend in the rise of universities in India before and after independence. If we only take the period of 100 years of modern Indian universities from 1882, then we may very safely establish that the past hundred years of higher education in India is the combination of approximately two equal periods—colonial and independent India.

Expectations from Modern Indian Universities

Universities, throughout the world, are the indicators of intellectual traditions of the land and people where they exist. Oxford and Cambridge reflect the education heritage of Great Britain and similarly Nalanda and Takshashila reflected the same of the ancient India. Modern Indian universities have inherited nothing from these old prestigious seats of learning but have to discharge the responsibilities of the same degree. As a result of it, modern universities of India are allegedly carrying the dilemma of 'Indian idealism' and 'Western pragmatism'.

Various educationists have analysed the functions of universities. Lord Robbins enumerated the functions of universities of Great Britain with a different perspective whereas three popular education commissions of post-independent India visualize in a different version. Human societies face some identical primary problems everywhere in the world and differ in secondary problems. Therefore, universities have common functions in relation to solving the primary problems, and specific functions in solving the secondary problems. Modern Indian universities, born in slavery and nourished in independence, have to ascertain their functions in a new context of today's India. The aspirations and expectations of the people of India have been categorically documented in the preamble of the 'Constitution of the Republic of India'. 'Equality, liberty, fraternity and justice' are the core values for attaining the national goals, e.g. Secularism, Socialism and Democracy. Apart from these human ideals, the universities are supposed to fulfil the objectives in economic, social, cultural, etc. realms also.

Ashby (1966) might have been correct to write that 'the Indian university system was established in the 1850s in order to control expansion of higher education' but Pandit Jawahar Lal Nehru, the Late Prime Minister of India, summed up the basic objectives of the modern Indian university and its role in national life while addressing at the convocation of Allahabad university in 1947 in these words: "A university stands for humanism, for tolerance, for reason, for the adventure of ideas and for the search of truth. It stands for the onward march of the human race towards even higher objectives. If the universities discharge their duties adequately, then it is well with the nation and the people" (quoted in Indian Education Commission 1964-66, pp. 497-498)

Indian Education Commission (1964-66) observed the functions of universities in the modern world as follows:

- (i) To seek and cultivate new knowledge, to engage vigorously and fearlessly in the pursuit of truth, and to interpret old knowledge and beliefs in the light of new needs and discoveries,
- (ii) To provide the right kind of leadership in all walks of life, to identify gifted youth and help them develop their potential to the full by cultivating physical fitness, developing the powers of the mind and cultivating right interests, attitudes and moral and intellectual values;
- (iii) To provide society with competent men and women trained in agriculture, arts, medicines, science and technology and various other professions, who will also be cultivated individuals, imbued with a sense of social purpose;
- (iv) To strive to promote equality and social justice and to reduce social and cultural differences through diffusion of education, and
- (v) To foster in the teachers and students and through them in society generally, the attitudes and values needed for developing the 'good life' in individuals and society.

From the preceding enumeration of the objectives and the functions of universities, it is evident that universities should take the responsibility of social reconstruction through innovations. And the ultimate end of university education should be realisation of 'good life'. Like views have been expressed by John Henry Cardinal Newman in his popular book 'The Idea of A University', by Sir Charles Carter in his writing 'Higher Education for the Future', by Lord Robbins in 'The University in the Modern World', by A.N. Whitehead in 'The Aims of Education and other essays', and by a group of contemporary Indian educationists in 'A National University' edited by A B Shah as well as in 'Higher Education and Development' published by the Association of Indian Universities

Different angles undertaken for determining the objectives and functions of higher education through universities conclusively lead to convince us that universities are the 'nerve-centre' of knowledge industry of humanity in general, and of people of a specific land in particular. The critical problems being faced by world-humanity and by the people of that land should be encountered by the universities and consequently by their products. Miguel Parda (a famous Central American Social Scientist and Lawyer and elected as Rector of the National University of EL Salvador on 15 January 1981) very pinpointedly asserted that 'the university is the critical consciousness of our people'. The University Education Commission (1948-49) in India also emphasized the similar concept by writing the role of a Vice-Chancellor. The Commission wrote that the Vice-Chancellor should be the 'keeper of the university conscience'.

Determinants of Relevance

'Relevance' of any system implies the degree of consistency between the determined goals (expectations/purposes/objective) to be achieved by the system and the effects (products/services) actually produced by the system. If greater is the degree of consistency, the higher will be the 'relevance' of the system. Indian universities have

to discharge well-defined and well-destined roles to solve the complex societal challenges. Three major activities of the universities are—teaching, research and extension. Thus 'relevance' of a university should be evaluated in terms of the 'quality' but not the 'quantity' of these functions e.g. teaching, research and extension of knowledge. To many it appears quite paradoxical when we talk of compatibility between 'quality' and 'quantity' of education.

However, 'relevance' of modern universities in the Indian context connotes the desirable impacts created in three major domains of activities—teaching, research and extension—and consequently the 'efficiency' and 'proficiency' of the products in the process of social transformation.

But except for a few institutes almost all Indian universities are satisfied with successful transaction of the business of admission of students, routinised teaching (through lecturing and note-giving techniques), anyhow conduct of examination and conferring degrees/diplomas, medals, etc. The policy-makers, educational-administrators and even the nation-builders have become conditioned to perceive the 'relevance' of any university in the success of earlier mentioned business. The responsible authorities are not receptive to the social feedbacks about their product and also about the impact of the university system. The disgusted mass is in a dilemma whether to deprecate the universities or appreciate them.

Present Scene of Indian Universities

As far as 'relevance' of modern Indian universities is concerned, it is a very grave problem. The network of universities is diverse. The universities with all inconsistencies with their purposes have divorced the social challenges and are becoming unconcerned with their contexts. Whether Central or State Universities, all are controlling the business of admission and examination through affiliation to the colleges. Not a single university can claim to be completely residential. All kinds of structures of the

universities, e.g.—unitary teaching, federal teaching, teaching and affiliating, and purely affiliating are prevalent. The 'Correspondence University' and 'Open University' system is also there. But there is lack of social accountability in the mind of the staff-members and they have keen attraction towards 'elitism'.

'Over-formalisation' is another major problem of the Indian universities. Dichotomous departmentalization of knowledge, truncated teaching, lack of interdisciplinary approach, lack of integrating the teaching, research and extension and finally evaluating the 'efficiency' and 'proficiency' of the products through application, are the major flaws of our existing university system. The common people have still faith in the system but the system is not deliberately reciprocating in the similar manner to the common people.

Social expectations should be fulfilled by modern universities. If these universities are curbing the social evils and solving the social problems in a fascinating way, they are worth accepting. Mukherji very correctly observes: "In as much as universities do not function in a vacuum but form an integral part of national life, they are subject to external as well as internal pressures, which tend to interfere with the mainstream of their standards and occasionally with the purity of their administration. In order that they may function as free agents, making their decisions purely on the basis of merit and on academic considerations it becomes necessary for them to resist forms of such pressures which may cause them to deviate from the norms of academic policies and conduct. The purity of academic life and the maintenance of high academic standards can be ensured only if the Vice-chancellor, as the head of the university administration, has the strength of character to withstand such pressures from the government or the public, and if the executive council and other authorities of the university stand solidly behind him. University administrators cannot do better than follow the dictum of the Committee of Vice-chancellors and Principals of the United Kingdom that academic

standards once lowered are not retrievable and Gresham's law is applicable to them" (Mukherji, 1962).

Conclusion

Modern universities initiated in colonial India, are perpetuating the foreign tendencies in structure and function with complete inadequacies in resolving and solving the social problems of Indian society. Observations are explicitly revealing that faith of common people in the prevalent university system is decaying. Social expectations are not being fulfilled by these universities. The products of the universities are equipped with dichotomous knowledge and are

incapable of utilising the knowledge in real life situations.

The clearly observable demerits are . systemlessness, confusion of purposes, over-formalisation, lack of interdisciplinary approach, lack of social accountability and state of indifference towards lowering down of academic standards. If the system of modern Indian universities is not overhauled radically, the universities, though increasing in number, will incessantly lose their 'relevance' damaging the faith of common people in higher education. Without any further delay as well as without bothering for 'quantity', the 'quality' of university education should be thought afresh.

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TO OUR CONTRIBUTORS

JIE invites articles/papers on the impact of educational research on classroom practices and policy decisions. Specific examples where this impact is apparent may be given.

GENERAL EDITOR

Need for Moral Education

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THE rapid deterioration in moral standards is one of the alarming characteristics of modern societies. Educational institutions, for various reasons, have ceased to be temples of learning. There is mounting unrest on the campus. Even the educated youth lack direction. The society as a whole is experiencing crisis of values. It has been rightly observed that "the crisis in values which one sees in society is necessarily being reflected in the education system itself .. in so far as cultivation of values is concerned, the position today has probably worsened"¹.

Educationists, therefore, rightly feel the need for integrating ethical values with the teaching-learning process at least at the level of secondary education. The students must be stimulated to pursue the deeper meanings of life. The Kothari Commission rightly felt that while imparting education, due importance should be given to moral and spiritual values based on the Indian traditions from the point of national integration.

The question today is not old values versus new values. Some of the old values and practices may become irrelevant to the present conditions. Yet, there are certain eternal values preached by our ancestors. These have to be preserved at any cost. The present crisis has emerged because we

are fast moving towards a value-free society; the old values are disappearing, while new values have not taken their place. In tune with the advancement of science and technology, we have to imbibe new values also. The main problem facing the Indian society relates to the assimilation of the new social values so that the society can make rapid progress in all spheres².

It has been rightly pointed out by Swami Ranganathananda that "man must rise above the limitations of his organic system, of his ego conditioned by that organic system with the help of that organic system itself and expand spiritually so as to experience his oneness with other human beings, with all other beings, he must learn to extend his affections to others and to have others extend theirs into him"³. It is increasingly realised that science without spirituality is bound to lead us astray.

No doubt, various reforms have been introduced in the educational system from time to time, but the emphasis has been more on building skills and imparting knowledge than on values⁴. Our values determine our attitudes and building up necessary and desirable attitudes has an important place in education⁵.

Pedagogues all over the world bemoan the lack of appreciation among the youth of values

which are relevant to all times. The emphasis has to be, therefore, shifted from the present obsession with academic learning to character-building, cultural learning and practice of human values. This is required for making of the whole man who should be conversant with great ideas, develop the capacity to manipulate things for the ordering of a better life, and cultivate the art of human relation and harmonious and creative living⁶.

Of course, morality is essentially social in its origin. Moral standards, habits and ideals may vary with age, race, stage of civilization and evolution of the social institutions. There are, however, certain values having permanent value in the sense that they are relevant to all times. Great books, belonging to different religions, are read by all generations mainly because they preach eternal values. It is precisely for this reason that Prof. Theodore Brameld favoured "studying the religions of the world cultures sympathetically and thoroughly, both as great historical movements and as powerful moral beacons".

Educationists are no doubt convinced of the importance of moral education. But moral education has remained a sensitive and controversial issue because the various issues involved in moral education have remained unclarified. There has been controversy over what moral education means or should mean⁷. The concept of value education should be made clear first, before we can think of any programme of action in this direction⁸.

The Rationale

Modern science and technology have thrown up more problems than they have solved. Brute materialism has successfully eclipsed everything that is noble and sacred in human personality⁹. The deterioration of social and moral values among the youth has led to social and ethical conflicts, particularly in the Western societies¹⁰.

So many factors have contributed to the deterioration of the moral fibre of the youth. For

instance, films of today lay stress on sex and violence. The youth closely observe the elders. But there is declining moral standards even among the elders. This cannot but have deleterious effect on the minds of the youth. The children are forced to live in an environment which is known for corruption and scant respect to human values.

The Final Report of the International Symposium on the Evolution of the Content of General Education over the next Two Decades (UNESCO, Paris, July 1980) has laid stress on the growth of healthy personality through moral education when it said: "In order that an all-round education may help to prevent civil strife and war and establish peace, harmony and social justice in the world community, teaching on justice, freedom, and respect for fundamental rights, a sense of duty and responsibility, social balance—in short, everything that makes for the quality of life—should be provided as a value of the utmost importance, inseparable from the world view that should be developed in each pupil". Education uninspired by moral and spiritual values is directionless¹¹.

The individual's commitment to values is basic for the health and welfare of a free community. The healthy growth of society depends on the right human values. Value education should develop among individuals a sharing and cooperative spirit. The progress of science and technology would be meaningful only if it is matched by a value orientation of the human intellect and will¹².

Life is incomplete and meaningless without a sense of values and it is the value dimensions of living that is to be made explicit in schools. The role of the school is to make man aware of the meaning of life and to infuse in him a sense of idealism¹³. The task of value-oriented education is to bring about harmony between exterior self and inner self and to keep it out of the clutches of so-called politics¹⁴.

The Scope

What should be the contents of moral education? There are no rigid rules governing the scope of moral education. But, in the Indian context, at the elementary stage, curriculum for moral education may lay stress on true greatness, self-sacrifice service to fellowmen, good manners, bravery and obedience.

Moral education at the secondary stage may lay emphasis on conscience, patriotism, character-building, tolerance and contentment, discrimination between right and wrong, public morality, concept of brotherhood and a synthesis of science, morality and religion. At the higher secondary stage, moral education may lay stress on yoga, science and values, rationalism and scientific thinking. In the higher classes, a comparative study of different religions must be encouraged. This is bound to ensure social harmony in a multi-lingual, multi-racial and multi-religious society¹⁵.

At present, our education is devoid of human values, and it is making a new race of dyspeptics which has no concern for human values at all¹⁶. The younger generation should develop liking for values like truth, goodness, honesty, sincerity, hard work, gratitude and forgiveness. A value system becomes relevant to all times if it contains virtues like national service, fairness, harmony and cooperation, struggle for betterment, open mindedness, adjustment and assimilation, courtesy and humiliation. It is not enough if people are aware of the rights and privileges, they should also be fully aware of their duties and responsibilities.

One should not equate moral education with religions education. The Constitution of India has stipulated: "No religious instruction shall be provided in any educational institution wholly maintained out of state fund." However, in tune with the secular character of our state, teaching of noble ideals that are accepted by all religions should receive due attention. Thus secularism need not take anti-religious stand. What is important is the training of mind so that proper

attitudes are developed towards life and humanity, one's own country, international understanding, different religions, teachers and parents and others¹⁷.

The Conduits

The instruction for moral education should not be of a general and abstract nature. It should be based on situations faced by children. In other words, moral instruction should leave an indelible mark on the minds of children. For instance, a news item in the papers can be taken up to impress upon the child that morality does not consist in abstract ideals and goody goody maxims, but in actual standards of conduct by which the game of right living is played¹⁸.

It is unwise to assure that moral education can be imparted through books only. Apart from the fact that the personal example set by the teacher is important to inculcate a national outlook among the youth, the educational system has to use a wide variety of tools to popularise moral values among the students. These may include: games, reading story books, watching slides and movies and song sessions¹⁹.

According to one educationist, the educational system should aim at the following to make moral education effective²⁰:

- (i) common mass prayer before the commencement of the regular classes every day, by teachers and students together, helps to maintain mental equilibrium;
- (ii) silent meditation or worship may become an integral part of the college education;
- (iii) every student to be assigned to a particular teacher with whom he is able to have at least half an hour of communion every week, at the teacher's house;
- (iv) certain selected festivals, ceremonies and anniversaries to be celebrated so as to narrate their significance in our cultural heritage;
- (v) unseen and translation passages, with special moral emphasis, should be selected for examination papers; and

- (vi) distinguished students with model behaviour should be awarded handsome cash prizes.

The teacher's role is crucial in imparting moral education. It is not enough if he passes on information contained in the books; he should induce the students to cultivate certain qualities of mind and heart. The teacher must be a man of integrity and objectivity. He should set a good example to the students. At the secondary stage, in the moral education period, discussions between the teacher and the pupils may be encouraged²¹.

Provocative discussions dealing with important issues will facilitate the child's experience of genuine conflict and help towards more mature moral growth²². While the young receive value-oriented education, media should help provide value clarification to the adults as well, reducing dissonance to the minimum²³.

For successfully imparting moral education, adequate instructional materials like teachers' handbooks and graded textbooks must also be provided. It is suggested that (i) teachers can be given full freedom to plan, teach and evolve their own syllabus; (ii) audio-visual aids, films, tapes must be used to drive home the points; (iii) field trips, library and documentation services on moral education must be organised, (iv) pro-

gress and cumulative records and anecdotal records must be devised. These apart, efforts may be directed towards (a) specialisation at the teacher training level, (b) improving the pupil-teacher ratio, and (c) organising visits by teams of experts to several schools to teach students²⁴.

The responsibility of educational institutions in shaping the character of the youth has increased because the social institutions are far from perfect. As rightly observed by the Radhakrishnan Commission (1949), "left to homes and community the chances are that communal bigotry, intolerance and selfishness may increase"

It may, however, be noted that moral education is not limited to schools though they play an important role in shaping the character of the youth. The home is as important as the school in influencing the attitudes of the youth. Hence, parents should take particular interest in the behaviour of their children and take corrective steps if they misbehave. Films do have an educative value, but today they are being produced for their commercial value only. There is thus need for improving the environment in which the youth are placed. The educational system, the home environment and the external forces should be shaped as to develop among the youth a liking for eternal values.

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Personality Traits of Pupils and Teachers for the 21st Century

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FUTURE haunts mankind. Futurology, dreams, visions, predictions all show man's fascination with his uncertain beyond. No wonder then, he is always thinking about it and taking steps to ensure his future security, welfare and progress. Futurology, however, is not a science of prediction, it is a tool for current planning. The problem that we face in visualising the future is that it revolves around changes which are difficult to predict. The only thing which we can be sure of is that tomorrow will not be like today. It is nonetheless a fact that changes and challenges have become the daily diet of our time and society.

A good deal of debate is going on in the educational circles these days on the would-be profile of Indian society as it is likely to emerge, in the future, of which its education system could be a contributant and reflection. Figures indicate that during the 30-year period (1971-2001), the mortality rate is likely to fall from 15 to 9.6 per thousand. The 2001 census will probably establish a population of 945 millions as against 814 in 1988. There will be 200 million children in the age-group 6-14 in 2001 AD, and 370 million adults

needing education in the same year. If the existing school model is maintained in the 21st century, there will be need for 45 lakh teachers.

However, as envisaged in the New Policy on Education (NPE, 1986), in order to accommodate and groom the vast reservoir of human resource likely to flood the educational system in future, education must admit reforms, changes and innovations in its infrastructure. It must form a coordinated whole, must be total and creative and be the bulwark and driving force in the future of Indian education.

Seen from the practical angle, this implies that we shall have to concentrate on the main functionaries in the process of education, namely, the teachers and the beneficiaries, i.e. the learners who represent one of the two most significant components of the educational system and are major contributors towards building what may be termed as 'environment of an educational system'.

Taking into consideration the quantum leaps in knowledge, rapid scientific and technological advancements, wide-ranging opportunities and

multifarious challenges, new trends in teaching-learning and the ever-changing goals and structure of society, what nexus of personal qualities shall be required to be developed among the teachers and students of the 21st century India? This is a million-dollar question which needs to be answered today.

It is gratifying to note that our policy planners are aware of the future challenges which call for developing certain traits and abilities, capacities and skills. The NEP of India (1986) while laying emphasis on creating a quality conscious system, aims to produce people in education (educators, educands, etc.), who would have the attributes of functional and social relevance, mental ability and physical dexterity, efficacy and, above all, capacities, confidence and capability to communicate, innovate, experiment effectively and exercise initiative.

All this sounds very exciting but are the projections of the planners regarding the personality traits of future teachers and students in consonance with the perception of the present-day high school learners, prospective teachers and inservice teachers—groups who are destined to be parts of the educational system in the 21st century? The present research study purports to answer this question.

Review of Related Studies

A review of researches conducted on the personality traits/attributes of teachers and students reveals that, while there are available a host of studies on less successful and successful teachers: Peters and Gehring (1950), Hearn (1952), Witty (1942), Cortis (1968), Dornas and Tiedeman (1950), Evans (1959), Ryans (1951), Tarpey (1965), Warburton and others (1963) and V.D. Coats (1972); on popular secondary school teachers: Kaul (1972), Gupta (1977), Heil et al. (1960), Reudiger and Strayer (N.A.), Hern (1952) and Dodge (1943); on personality profiles of teacher-trainees and experienced teachers: Tripathi (1972), Srivastava (1974); on effective and ineffective teachers: Chhaya (1974), Gupta

(1975), Barr (1955), Errickson (1945), Hellfritsch (N.A.), Ryans (1952), Gupta and Kapoor (1981); on the attitudes, qualities and personality of teachers: Ryans (1960), Misra (1967), Saxena (1969), Kaul (1972), Tripathi (1972), Singh (1974), Gupta, R.C. (1975), Gupta, R.N. (1977), Gupta, V.P. (1977), Singh (1978) and Mishra (1979), there has hardly been any research effort in the direction of delineating attributes of students and teachers with a future perspective. Similarly, while ideal learner characteristics and attributes have been subject to rigorous empirical analysis and research, future perspective has largely been missing from the studies. Mention can, however, be made of some interesting, incisive and scholarly deliberations resulting in publications like *Learning To Be* (UNESCO), where the world of education today from the point of view of tomorrow may have been discussed at length. Nonetheless, in India, especially during the recent years and more so after the enunciation of the NPE, no research study seems to have been conducted on the topic.

Objectives

The main objective of the present research study was to delineate the personality profiles of teachers and students, considered to be ideal for the 21st century education/society, as envisaged by high school students (Classes IX and X), B.Ed. teacher-trainees and a cross-section of inservice teachers teaching at different levels. Also, it was considered important to compare the profiles of ideal students and teachers as crystallized for the different groups with a view to studying the community and uniqueness of profiles and implications of the same for the theory and practice of education in the country.

Sample

The sample for the present study consisted of 350 pupils and teachers of Jammu City schools. The break-up of the sample selected is given below:

Group	Number
High School Students (Classes IX and X)	200
Prospective Teachers (B.Ed. Trainees)	100
Inservice Teachers (Primary to Doctoral Level)	50
Total	350

Tool Used

The MIER Personality Check-list specially developed and standardized by Gupta and Srinivasan (1988) was used in the current study. The check-list comprises 175 words covering an exhaustive range of adjectives describing human personality. There is no time-limit for administering the check-list. However, it takes nearly 30 minutes for responding to it.

Procedure

The personality check-list was administered to 100 pupils studying in Class IX, 100 in Class X (200 in all), to 100 teacher-trainees in B.Ed. and 50 school teachers in four separate sittings in February, March, 1988. The respondents were directed to select 15 personality traits/adjectives

each for students and teachers, which according to them, would be ideally suited for sufficient functioning in the 21st century. The obtained data were statistically treated by calculating frequencies and percentages. Thereafter, the most frequently checked 15 traits for pupils and teachers, selected by the three groups of respondents (Classes IX and X, B.Ed. and Faculty) were arrived at. The qualities least preferred by the population were also identified from the infrequency of responses checked by the population. These two categories of responses were taken for comparative analysis, interpretation and discussion of results.

Results

The results of the present study are represented in Table 1 and 2 below.

Discussion and Implications

An ideal teacher or student cannot be created by a decree as it were. He/she has to grow out of

TABLE 1
Ideal Personality Traits Visualized for a 21st century Learner by Pupils, Prospective and Inservice Teachers (1,2,3)

Sub-groups						
	Pupils N = 200		B Ed Trainees N = 100		Inservice Teachers N = 50	
T	Punctual	(79%)	Disciplined	(38%)	Responsive	(42%)
	Truthful	(78%)	Curious	(32%)	Spirited	(40%)
	Self-confident	(74%)	Hard-working	(30%)	Ambitious	(38%)
R	Disciplined	(76%)	Ambitious	(29%)	Disciplined	(36%)
	Academically Successful	(70%)	Goal-oriented	(28%)	Energetic	(32%)
	Open-minded	(69%)	Self-confident	(27%)	Fearless	(30%)
A	Presence of Mind	(68%)	Punctual	(27%)	Goal-oriented	(29%)
	Clear Thinking	(64%)	Active	(27%)	Inventive	(29%)
	I	Fearless	(64%)	Open-minded	(25%)	Optimistic
Goal-oriented		(63%)	Presence of Mind	(25%)	Persevering	(27%)
T		Zestful	(60%)	Quick of Grasp	(25%)	Open-minded
	Humorous	(58%)	Determined	(25%)	Curious	(25%)
	S	Resourceful	(58%)	Adventurous	(23%)	Bright
Highly Creative		(57%)	Alert	(22%)	Highly Motivated	(23%)
Active		(51%)	Truthful	(22%)	Highly Creative	(23%)
1 Arranged in order of frequency of responses 2. Percentage given in parentheses 3. 15 Traits selected out of 175 adjectives in the MIER Personality Word List						

1 Arranged in order of frequency of responses

2 Percentage given in parentheses

3 15 Traits selected out of 175 adjectives in the MIER Personality Word List

TABLE 2
Ideal Personality Traits Visualized for a 21st century Educator by the Respondents (1,2,3)

Sub-groups						
	Learners N = 200		B Ed Trainees N = 100		Inservice Teachers N = 50	
T	Academically Successful	(80%)	Active	(35%)	Progressive	(42%)
	Self-confident	(79%)	Broadminded	(35%)	Mature	(40%)
	Highly Intelligent	(78%)	Affectionate	(34%)	Innovative	(40%)
	Open-minded	(78%)	Dynamic	(32%)	Highly Creative	(39%)
R	Punctual	(77%)	Humorous	(30%)	Visionary	(39%)
A	Disciplined	(76%)	Punctual	(30%)	Explorative	(38%)
	Self-starter	(74%)	Friendly	(28%)	Accountable	(38%)
I	Accountable	(74%)	Disciplined	(26%)	Disciplined	(38%)
	Clear Thinking	(74%)	Fearless	(23%)	Conscientious	(33%)
T	Alert	(72%)	Free From Frustration	(24%)	Sharp	(33%)
	Communicative	(72%)	Self-confident	(25%)	Resourceful	(33%)
S	Adventurous	(70%)	Academically Successful	(25%)	Ambitious	(31%)
	Meticulous	(65%)	Highly Intelligent	(23%)	Goal-oriented	(31%)
	Free From Frustration	(64%)	Sympathetic	(23%)	Highly Motivated	(31%)
	Well-adjusted	(61%)	Clear Thinking	(21%)	Presence of Mind	(30%)
1 Arranged in order of frequency of responses						
2 Percentage given in parentheses						
3 15 Traits selected out of 175 adjectives in the MIER Personality Word List						

the realities of life. It is difficult to visualize teachers and students of tomorrow without taking into consideration the views, expectations and aspirations of their counterparts today. An analysis of the results brings to light the following points:

1. It is obvious from the responses of high school learners and prospective teachers that they have a good understanding of the profile of future learners and teachers. Their selection of personality traits ideally suited for teachers and learners for the 21st century indicates that their expectations are high and aspirations, positive, futuristic and dynamic. Educators and educands will have to possess a combination of outstanding personal, professional and social qualities. This outlook augurs well for the future generations of learners and teachers and also disputes Patrick Golring's contention that the human race in the 21st century may be heading towards "... becoming a nation of processed people, scientifically produced and fed, educated by machinery, conditioned by television, housed in batteries of human nesting boxes to

live out allotted spans before being sent to the electric furnaces of the crematoria".

2. An analysis of the responses of inservice teachers regarding the profiles of the 21st century educators and educands reflects a growing understanding, on their part, of the rapidly changing scene and structure of education. Inherent in their responses (Tables 1 and 2) is the felt need to replace today's traditional stagnant and conformity-ridden system with an approach which is go-getting, dynamic, forward-looking—one that will admit challenge, reform, innovation and originality with a consequent emphasis on inculcation of personal attributes in time with the former.

3. It is evident from the responses furnished by all the three categories of respondents that the teachers and the taught ought to be a breed apart, fully geared to meet the 21st century needs and goals. This calls for a change in the entire education system. A quality conscious teacher education system which produces teachers having the attributes of functional and social relevance,

mental ability and physical dexterity, efficacy and accountability and, above all, the confidence and capacity to communicate effectively and exercise initiative, be innovative and experiment with new situations will have to be created, monitored and updated from time to time. From the point of view of future learners, the personality traits highlighted in the study can be inculcated only through a radical transformation in curriculum, teaching strategies, evaluation methodology and in the overhaul of the teaching-learning process, with a view to aligning these with the future expansion in knowledge, future needs and challenges of the times, which would necessitate nurturing creativity resourcefulness, open-mindedness and innovation.

4. Rote learning will have to be replaced by innovative and environment-related teaching-learning strategies.

5. The existing system of examination and evaluation will have to be restructured to measure qualities as envisaged by the respondents rather than qualities which stress conformity, memorization and traditional thinking.

6. In order to gear our education system for the type of human infrastructure likely to emerge as a forerunner in the 21st century Indian education, systematic coordination has to exist between the three main groups in education, viz. educators, educands and policy planners.

7. More research studies concerning ideal personality traits need to be conducted on larger samples to elicit the viewpoints of a cross-section of people to supplement the few existing ones.

8. Lastly, the need to organize awareness programmes for teachers, planners and trainees to educate them about the educator and learner qualities which need to be emphasised keeping in view the 21st century needs cannot be underestimated.

All said and done it is obvious from the results of the current investigation that the educational scenario, both present and future, cannot be viewed disinterestedly any longer. It is certain that the education system with all its components will have a major nonconservative role to play in the 21st century education.

The results of the present investigation, though exploratory in nature, corroborate, to a great degree, the views of our planners regarding the education reforms needed to catapult our masses into the 21st century by inculcating in them qualities of head and heart, social and professional skills through a team of professionally trained, carefully selected and highly motivated, involved and accountable teacher force. A Programme of Action has already been initiated in this regard. To what extent we succeed in our mission, time alone will tell.

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Development of Critical Thinking in History

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HISTORIANS have defined history, in their own fashion. Henry Johnson felt that history in its broadest sense, "is every thing that even happened ... history in the usual acceptation of the term means history of man". To Karl Marx, history, of all hitherto existing society, is the history of class-struggles. Nehru went a step further when he said, "History is the story of man's struggle through the ages against nature and the elements; against wild beasts and the jungle, and some of his own kind who have tried to keep him down and to exploit him for their own benefit".

Definitions can be piled up but there is no universally-accepted definition of history. The life-line of history confirms that it is the record of man's growth from the stage of barbarian to the civilized.

General Aims of Teaching History at Various Levels

We offer the subject as an important discipline up to ten years of schooling. However, it has its important aims at different levels:

Elementary Level: In view of the physical and mental development of children at this stage, the aims have to be simple as —

1. The child's environment should provide opportunities to him to know 'why' of certain things which held his interest.
2. Stories hold the attention of a young child. These should be used to build patriotism and instill courage in him as well as train his creative faculty.
3. Important events of history relevant to the student's social group should be compared to similar events at the national level.
4. Students should be helped to arrive at simple critical analysis of the great personalities of the past and the present to weigh their influence at the local and national levels.
5. The recognition of 'unity in the diversity in India' should be a strong aim at this stage.

High and Higher Secondary Level: At this stage the pupils are more matured, and so the aims are expected to be richer.

1. To cultivate a forward look by encouraging the students to have a vision of the future and how to shape it.
2. Significant facts in world history should be brought home to the students.

3. Training should be given here for discussing controversial issues objectively and dispassionately under the master-mind of their concerned teacher.
4. Teaching tolerance with regard to different faiths, cultures, and ideals.
5. To promote an understanding of the common roots of human civilizations and an appreciation of the basic unity of mankind.

History vis-a-vis Critical Thinking

It should not be ignored that history is both a science and an art. So a real student of history will never accept the already-existing works without subjecting them to critical X-ray so as to arrive at the truth as far as possible.

Critical thinking in history seems to be a four-fold activity, namely (1) seeking the truth, (2) weighing of the facts, (3) judging the facts, and (4) subsequently making decisions. Thus, primarily, in all historical pursuits our basic and serious intention must be "to seek truth". The students should remember that the job of "history is not to please, nor to give practical maxims of conduct, nor to fire one with patnotic favour, nor to afford mental training, nor to arouse the emotions, but to equip the readers with knowledge—pure, simple and truthful".

Secondly, weighing of historical facts is next step in the direction of generating critical thinking among lovers of history. Exploration of facts and ideas to determine their objectivity, validity and reliability, is a serious business. Such an approach is the backbone of progressive thinking in history.

Judging the facts is another step in the direction of cultivating critical thinking. This demands no rash jumping to conclusions and making sweeping generalizations. Testing and re-testing of the factual data goes a long way in arriving at free, frank and authentic judgement.

Lastly, it is this judgement which makes the road clear for decision-making process. This is a must for developing the general scholarship of

the concerned learner. Personal prejudices, political leanings, propaganda, distortion of facts, exaggeration of conclusions and the like are the enemies of honest judgement and valid decision-making.

Therefore, it follows that the four components of critical thinking, viz. seeking the truth, weighing the facts, making judgements and drawing decisions are to be followed strictly to make history a scientific study and a rich storehouse of life experience.

Need for the Development of Critical Thinking

Indispensable requirement of history teaching is the inculcation of critical insight among the seekers of knowledge and wisdom. With this in mind, the four pillars of teaching history are: time, place, development and continuity. These have to be an appropriate means of service for achieving the desired ends.

Primarily, it is to be understood that historical events have not taken place in vacuum, but are spread over a huge span of time like a river that has never stopped for a very long period. Therefore, history has to be understood in the stream of time which is fundamental for scientific understanding of historical events in their proper perspective.

Secondly, events have taken place at different occasions because history is the drama of evolution—from primitive days to the modern days—scattered all over the globe. Thus, 'place sense' is equally important like the 'time sense'. Time and space function 'as the two lamps of history for intelligent thinking'.

Thirdly, man's evolution is accompanied by social, cultural and other developments. Great personalities have shaped the destiny of mankind with their might, morality, politics, religion and other tools. The teacher has to highlight these developments from a comparative point of view to enrich the intellectual faculty of his students.

Fourthly, it also depicts how various civilizations and cultures pass a continuity which is evident in great historical works.

It is, therefore, very certain that arriving at a particular scientific understanding from the systematic knowledge with vast dimensions of time, place, development and continuity will generate exceptional thinking among students.

Methods and Techniques of Developing Critical Thinking Through the Teaching of History

It is an admitted fact that there is no single road to successful teaching. In fact methods and techniques of teaching history help us a lot but actually we are conditioned by certain factors like the learner, the topic, the facilities available, the nature of the subject and the involvement of the teacher. Therefore, let us turn to some important methods and techniques of developing critical judgement through the teaching of history.

Methods

Primarily a method is a means to an end, and not an end itself. By and large many methods of teaching are inter-linked. Therefore, we take some selected methods only.

1. *Assignment Method.* H R Douglass and others are of the opinion that this method represents one of the most important phases of teaching. But assignment has to be definite, clear, interesting, curious, flexible and of an appropriate size.

This method is an activity-oriented method tapping the full involvement and creative ability of learners. The objectives are set and the method meets equally the requirements of gifted, average and slow-learners.

The best example of an assignment method can be to prepare an assignment on "Akbar—the Great, depicting his capability to integrate the country under very odd circumstances". Library facilities, Mughal maps, and above all the fullest and wholehearted co-operation of the concerned

teacher is a must for the success of the assignment method.

2. *Project Method.* In the words of Burton "the problem is a project which results in discovering things. The main element is not what makes the activity a project, but the problem-solving of a practical nature, accompanying the activity". We have to select a project carefully, plan it scientifically, execute it completely, exercise follow-up work, evaluate it and then record it completely.

The best example of project work can be preparing a project on 'Indus Valley Civilization' or 'National Movement in India'. The project can be run in groups, dividing the work to discover the material from books, pictures, scrap books, journals, dictionaries, encyclopaedias, charts, atlases, year-books and the like.

3. *Story-telling Method.* Children everywhere in the world are fascinated by stories. In this connection Finley and Meeley remark: "As history is story and biography, in junior stage it is mainly a question of telling the story well. The story should be told in a vivid, graphic manner in the vernacular observing the chronological order". Therefore, stories should be properly selected, appropriately narrated, enjoyably presented and accompanied by pictures, maps, actions, etc.

The main advantages of good story-telling are the development of historical imagination, training creative and manual faculties, learning the art of speech and action. Good story-telling has produced great personalities like Gandhi, Shivaji, Napoleon and many others.

4. *Source Method.* "History as a subject of study is more or less completely at the mercy of source". The broad classification of sources is (1) primary sources, and (2) secondary sources. Primary sources are original documents or remains which are the first witness of a fact. They have two kinds, namely, consciously transmitted information in the form of court decisions, official records, autobiographies, letters, diaries, genealogies, paintings, inscripts and research reports. The second kind is unconscious testimony

the form of language, literature and institutions of various types.

The secondary sources of information are those where one who has neither been a participant in nor an eye-witness of, the original event. Most textbooks and encyclopaedias are examples of secondary sources.

The method invigorates constructive imagination, develops a sense of reality, improves reading and critical judgement. The best topic in this method can be titled as: Describe Shah Jahan as a magnificent builder in the light of his buildings which still exist.

Techniques

As regards the various techniques of developing critical thinking through the teaching of history, an effective history teacher will judiciously employ the use of historical tours, visiting museums, exhibitions, festivals, picture halls

and art galleries. Besides, special TV serials, field trips, dramatization, full-length plays, pageant shows, and film shows are pressed into service for fulfilling the aim of promoting crystal-clear thinking among the learners.

Conclusion

To conclude, let us quote Arnold Toynbee who has most appropriately summed up the view presented so far analytically in the following words: "for any would-be historian and especially for one born in these times, cultivation of critical thinking is a priceless boon. The teaching or study of history is a training-ground for scholarship to add his bucketful of water to the great and growing river of knowledge fed by countless bucketful of the kind. If any individual view of history is to be made at all illuminating, or indeed intelligible, it must be presented in its origin, growth, and social and personal setting".

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Evaluation in Total Language Curriculum: New Vistas and Dimensions

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IN reference to the objectives of teaching and learning of languages the National Policy on Education (1988) states:

The foremost objective in teaching languages is to help learners to develop abilities to communicate with the society around us and to understand and make use of spoken and written communication. It is better to teach the *grammar of communication* than description grammar. (p. 221)

It has been observed that *language-acquisition and cognitive growth go together*. Since at the age of 6+ the pupil acquires many cognitive skills, would it not be better to practise these in the language in which the pupil thinks? Since each language has its own way of looking at the world, the pupil in learning languages learns to analyse the reality around him in different ways. (p. 223)

Keeping these objectives in view, a comprehensive or total language curriculum for our schools is envisaged here. This total language curriculum is based on the following ideas:

- (i) An effective language instruction is built on, and determined by, an understanding of learner's physical, mental and psychosocial growth and development.
- (ii) It emphasizes language as a tool of thinking and promote the development of each

learner as an independent thinker in that pupils learn to use language for a variety of purposes, i.e., to inquire, to discover, to describe, to report, to relate, to reason, to explain, to regulate and so on, as well as to obtain information and ideas from others (Britton, et al. 1975, Halliday, 1973; and Moffet, 1968).

- (iii) It builds on the close relationship between children's language and their experience. Language is concerned with ideas. Since ideas result from experience, language growth is dependent on experience. Hence a symbiotic relationship between language growth and conceptual growth (Piaget, 1967).
- (iv) It recognizes that the ultimate purpose of language instruction is helping pupils acquire facility in communication. So it provides a setting for interpersonal communication and group interaction in which language can be learned in natural social situations and in relation to practi-

cal needs and experiences of the learner (Hymes, 1971).

- (v) It is concerned with *total language* and is based on an understanding of the nature of language and how it develops. A complete language curriculum recognizes and builds on the relationships among listening, speaking, reading and writing (Thorn and Braun, 1974).
- (vi) It provides for an integrated language curriculum—the four areas of language are taught and learned as closely related parts of single language curriculum which, at the same time, is integrated with the rest of the school curriculum. This, in fact, is closely tied to yet another important educational concept of 'Language Across the Curriculum' (Bullock Report, 1975).

The Concept of Evaluation

The terms 'valuation' and 'evaluation' are often used as if they were synonymous. Valuation or measurement is scoring or assigning marks to student papers. Evaluation is much broader in scope and purpose. It is a process through which a value judgement or decision about an object, event or idea is made according to one or more criteria, and according to the background and training of the evaluator. What we have in our schools and colleges today is the practice of 'valuation' not 'evaluation'.

The whole process of evaluation includes *describing, measuring, and judging*. Are we doing all these three (i.e. describing, measuring and judging) in the process of teaching-learning language? Evaluation in education, to be worthwhile, should serve at least three purposes: (i) *To inform the learner* of his or her progress—the strengths on which he or she can build. If carefully done, this information would help them become aware of the processes of their own learning, (ii) *To guide the teacher* in planning his lesson and in instructional practices, (iii) *To com-*

municate pupil progress to parents—to report pupil's strengths and weaknesses.

A balanced and comprehensive evaluation scheme serves adequately each of these three purposes and provides information about both competence and performance in each of the four areas of language.

Problems in Evaluating Language Learning

If we recognize and accept the idea that language is more a *process* than a *product*, then we encounter some problems in evaluating the process of learning a language. For example, problems of evaluating intangibles in language, i.e. quality, attitudes and skills, and growth in language competence and growth through language do become real problems in our routine language pedagogy unless we change our very approach to language teaching-learning.

A responsible evaluation considers the full spectrum of attitudes, skills and abilities in all areas of language—not just in the ones that are easy to measure—and the growth of such intangibles over a period of time, not at any given point in time.

A Scheme of Evaluation in a Total Language Curriculum

1. Evaluating Oracy Skills

Evaluation of pupils' listening and speaking in our present system is veritably non-existent. While traditional paper-pencil tests have a very insignificant role in the evaluation of oral language, informal oral language evaluation methods such as teacher observation (check lists, etc.) of pupil communication in natural social situations (debates, 'show and tell' activities), pupil self-evaluation and peer evaluation are of immense benefit to the teacher. It is extremely important that the evaluations of their work contain direct and specific guidance for children. Time spent talking with children about their oral language and helping them to set standards by

which they can evaluate their own proficiency will pay dividends in language growth.

Discussion is a method of communication, a method of learning that pupils need to be able to use independently both in and out of the classroom. True discussion requires careful listening as well as thoughtful speaking. As children become involved in true discussion with adults, the grammatical forms and registers get established, in a sense, the development of children's conception about relationships and social conventions takes place.

Discussion should be used when it is the most effective method of achieving instructional objectives. The thoughtful teacher assesses the usefulness of any discussion in terms of the pupils' learning and the objectives set for and by them. Locally prepared check-lists to evaluate pupils participation during discussion are useful. In addition to 'during-discussion' evaluation, careful 'post-discussion' evaluations are needed to yield a comprehensive picture of pupil performance. An ingenious teacher, for this reason, takes into consideration children's self-evaluation and peer-evaluations while making value judgments about pupil participation.

2. Evaluating Literacy Skills

In our present system, evaluation of pupils' comprehension and composition is done in a very partial, mechanistic and reductionistic manner in that only the *product* is marked for its superficial accuracy and tidiness disregarding entirely the psycholinguistic *processes* of reading and writing. Recent developments in the field of psycholinguistic suggest that language learning is an active process—involving the cognitive and linguistic skills of the learner. The language process essentially involve propositions—all reflect an imperfect correspondence between surface structure and deep structure. Just as there are natural stages in a child's acquisition of literacy skills. This hypothesis rests upon various observations such as: (i) Language learners initially attend much more to deep structure than

to surface structure. Specifically, they attend more to the basic elements of underlying propositions than to other words and elements of the sentence, (ii) Language learners often make errors or slips that are a sign of progress rather than of regression, (iii) Language learners unconsciously formulate hypotheses about the structure of the language they learn and about the nature of the language processes (Weaver, 1979).

Basically, reading is a process of making sense of the printed matter. It involves an active search for meaning, for the underlying propositions and their relations. In exploring meaning, readers use linguistic cues and semantic cues, both to predict what will come next and to confirm or correct their predictions.

To determine how well students can use both linguistic cues and semantic cues to predict and confirm or correct as they read, teachers can analyze the students' oral reading miscues (Goodman and Burke, 1972) and/or examine their responses on a 'cloze' exercise (Bormuth, 1968). The cloze procedure is, in fact, one of the best ways of helping readers who need to make more use of syntactic knowledge and meaning as they read. Similarly, 'maze' procedure (Guthrie, 1973) can be used to test readers' knowledge of diction and other rhetorical expressions. In fact, exercise or tests of this kind, in addition to assessing readers' reading ability, should help them become more proficient readers.

Writing is a difficult and demanding task, cognitively and linguistically. It is laborious and time-consuming, and the ability to write well usually develops slowly with the writer's awareness of different phases of writing—from idea generation to transcription and editing.

In evaluating writing, as with oral language, development and presentation of *ideas* should be given priority. Care must be taken to evaluate the quality of written expression in terms of the purpose for which it was intended and the audience it is addressed. The numerous skills and abilities connected with writing should be evaluated

within a meaningful context. Matters such as punctuation, spelling, handwriting, and usage must be considered within the context of the *purpose, audience, and message*.

A useful evaluation of writing is one that directs the writer's attention to strengths in his or her writing, to ways he or she can improve, and it assures the writer that the message was received without any ambiguity

Finally, evaluation in 'total language curriculum' as envisioned here is not a thing apart

from the daily teaching-learning activities. As an integral part of each language activity, both teacher and pupil collaborate and evaluate. The success of the 'total evaluation in total language curriculum' depends on the teachers', teacher educators', supervisors' and parents' perception and appreciation of the meaning, scope and functions of the concept of the 'total language curriculum', of the very philosophy of that project Unless this is brought about, any talk about 'evaluation' would be vacuous and idle.

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Information-processing Models of Teaching: An Analysis

(SMT.) A. LAKSHMI RAVIKANTH

TEACHING may be regarded as an activity aimed at the achievement of learning, and practiced in such a manner so as to respect the student's intellectual integrity and capacity for independent judgement. Such a characterisation has two important aspects: first, it emphasises the intentional nature of teaching, its distinctive goal-orientedness instead of being a distinctive patterned sequence of behavioural steps monitored by the teacher; second, it demarcates teaching from other activities, namely propaganda, suggestion and indoctrination which are aimed at modifying the person, but avoid encouraging him from exercising his judgement on underlying issues. Steven M. Cahn says: "In teaching we do not impose our wills on the student but introduce him to the many mansions of the heritage in which we ourselves strive to live, and the improvement of which we are ourselves dedicated". Competency in teaching can be expressed in terms of the teacher's ability to reach out to a heterogeneous group of children by creating a multi-dimensional environment for them.

A model of teaching as we understand today is an instrumental design which describes the process of specifying and producing particular environmental situations which cause the students to interact in such a way that a specific

change occurs in their behaviour. In other words, it is a plan or pattern which is instrumental in shaping the curriculum in relation to different aspects like designing instructional material or guiding instructions in the classrooms. A model of teaching is merely a tool for thinking about classroom training, it is a set of concepts carefully arranged to explain what teachers and students do in a classroom, how they interact, how they use instructional materials and how these activities affect what students learn. It is important to recognise that models are constructed on a hypothetical basis and necessarily have to be tested, before considering their applicability to the classroom situation. Creation of an appropriate environment is the basic assumption on which all models of teaching are founded. Secondly, content, skill, social relationships, activities, infrastructure facilities and their use from an environmental system, whose interaction and combination creates different types of environments thereby eliciting various outcomes.

Families of Models

The phrase 'models of teaching' has been associated with Bruce Joyce and his colleagues whose approach to models of instruction raises new and interesting issues about the charac-

teristics of models. They are interested in models that can be used to make decisions and enable the teaching and learning process not only to be effective but also practicably applicable to day-to-day classroom situations. For this, the primary requisite should be such that the model and its concepts should not be too vague or too much lost in detail. The time-frame of a model should be such that it adjusts itself to the time-schedule of a class. Thus models should encompass strategies that occur in a single lesson or perhaps in a unit of study. The model should not be too complex or overtly simple. Different models have to be used for different purposes.

Information-processing Models

The models of teaching belonging to this group are oriented towards the information-processing capabilities of students, and the ways in which they can improve their ability to master information. The *prima facie* objective of the models belonging to this category is to help students to develop those competencies by which they can process information from the environment to the best of their comprehension. They refer to how the ways in which people can 'handle stimuli from the environment, organise data, sense problems, generate concepts and solutions to problems and employ verbal and non-verbal symbols'. This does not necessarily imply that models belonging to this family concentrate on the academic disciplines only, instead, they are also concerned with social relationships and development of an integrated functioning self through intellectual functioning. The underlying assumption is that the student learns to process the concepts and ideas of a discipline and incorporates them into his own system and behave differently as a result.

To a large extent conveying information is the basic functioning of the school and that is why one has a wide range of models in this family. However, each model has a distinct point of view about how people think and how to affect the ways they operate on information. They vary in their ap-

proach where some focus on elementary aspects of information-processing such as how to memorise, whereas others are designed to influence complex thought patterns. Some centre on teaching and thinking, some teach general or specific methods of inquiry while others facilitate the learning of subject matter. The models are either inductive, deductive or lead the children to learn through guided discovery.

The essential purpose of the models in this family are:

1. The mastery of methods of inquiry.
2. The mastery of academic concepts and facts.
3. The development of general intellectual skills, so as to think more logically.
4. To nurture the development of social skills, understanding of values and personal understanding.

Since the range of information-processing models is extensive, trying to grasp the family of models in its entirety is a formidable task. Nevertheless, to begin with, teachers can orient themselves to one or two models and try to apply the same to improve the thinking ability of the students in appropriate classroom situations.

Piaget's Model of Knowledge Acquisition

Piaget's genetic epistemological theory extensively describes about children's cognition, their intellectual development, imagery perception, mathematics and science learning and language development. In this theory of development he asserts that human beings develop complex levels of thinking in definite stages where each stage is characterized by the position of certain concepts or intellectual structures. The twin processes of assimilation and accommodation fit experiences and accordingly shape on individual's behaviour. The child's intellectual movement takes him forward from a sensory motor stage to pre-operational, concrete operations and finally to formal operational thought where appropriate cognitive thinking takes place.

In Piaget's model of teaching, productive learning, understanding and creativity are highly valued. Student discovery or re-discovery of concepts and principles through active experimentation is the primary method of instruction. Direct instruction of concepts and learning shares principles with John Dewey's model of problem-solving. Instruction involves "teaching principles and abstractions by having the learner's re-construct them in carefully designed educational settings involving experiments and problems".

Stages of Development and Associated Thinking Pattern

1. Sensory-motor stage	0-2 years	Transductive thinking
2. Pre-operational stage	2-7 years	Intuitive thinking
3. Concrete operational stage	7-11 years	Inductive thinking
4. Formal operational stage	11 onwards	Deductive thinking

The teacher's role is to provide an environment in which students construct knowledge for themselves through questioning and experimenting. Teachers should refrain from giving answers directly but may use leading questions that stimulate further thought and exploration. The student's role in the learning experience must be active and self-discovering one.

Model of Teaching

It requires teachers to give tasks to observe how they interact with the tasks and respond by asking for justification or offering stage appropriate counter suggestions.

The following is an example of how to develop a task based on the Piagetian model of teaching:

Task — Term-to-Term correspondence.

Purpose of Task — To assess a child's comprehension of one-to-one correspondence.

Materials — 18 blocks, nine each of two different colours.

PROCEDURE

Phase I: Arrange nine blocks of one colour in a row between the examiner and the child, placing the blocks about an inch apart. Ask the child to place the blocks of the second colour in front of each of the blocks that the examiner set out. After the child agrees that there are the same number of blocks in each row (A), collapse one row of blocks so that the row is shorter in length than the other row (B).

A □ □ □ □ □ □ □ □ □
B □ □ □ □ □ □ □ □

Phase II: Ask the equivalence question—Does one row of blocks have more blocks than the other, or do both rows have the same number of blocks? Request reasoning for the answer. Make a counter suggestion if the answer and reasoning are "correct". Move the collapsed row of blocks back to the original position (A). Ask the equivalence question again. Collapse the row not previously collapsed and repeat the procedure.

Phase III: Counter suggestion—If one block is removed from this row (the longer row), each row will still have the same number of blocks, right?

SCORING

Each task carries four marks:

1 mark — correct judgement

1 mark — correct logical justification for that judgement.

1 mark — for correct response to counter suggestion.

1 mark — for correct justification for that counter suggestion.

Syntax of Developmental Model		
Phase I <i>Confrontation with Stage-relevant Tasks</i>	Phase II <i>Inquiry</i>	Phase III <i>Transfer</i>
Present a puzzling situation well matched to the learner's developmental stage.	Elicit the student's responses and ask for justifications. Offer counter-suggestions and probe the student's responses	Present related task and probe the student's reasoning. Offer counter-suggestions.

LEVELS OF PERFORMANCE

Equivalence in one-to-one correspondence is not attained until around the age of 7 on the average. Prior to this, children may be able to place objects in one-to-one correspondence, but, as in the above problems, equivalence is not assured. For the pre-operational child, the longer row has more elements than the shorter row even though they have been placed in correspondence.

The following is an example of an interview of a seven-year old child's comprehension of one-to-one correspondence.

The examiner arranges a row of nine blue blocks, each about an inch apart, between himself and the child. Examiner: Will you make a row of blocks using the red ones just like my row, and right in front of you? The child makes a row below the Examiner's row by first placing two end blocks in position, then placing eight blocks between these two without any careful comparison.

Examiner: Does one row of blocks have more blocks than the other, or do they both have the same number?

Child: They are the same.

E: Are you sure?

C: Yes.

E: How do you know they are the same number of blocks? (Request for reasoning).

C: I can count them. (The child proceeds to count the blocks in each row. He counts nine for the blue row and ten for the red row). They are different. There are more reds.

E: Can you make them so they have the same number? (The child removes one of the red blocks from the middle of the row and lines the other red ones up corresponding to the blue ones).

E: Now both rows have the same number of blocks?

C: Yes.

E: Okay, I am going to move my blue blocks together like this. (The row of blue blocks is collapsed so that they are about 1½ inch apart). Now, are there more blocks in my row or in your row, or do we both have the same number of blocks?

C: I have more.

E: How can you tell? (Request for reasoning).

C: My row sticks out more (Pre-operational reasoning).

E: Okay, I am going to make my row just like your row again. Who has more blocks now, or do we have the same number of blocks? (The Examiner makes his row of blocks as long as the child's).

C: Same.

E: How do you know? (Request for reasoning).

C: See, they both come out to here and here. (The child points to the ends of each row).

E: Now, if I move your blocks closer together (the child's row of blocks is collapsed the way Examiner's row was previously), do we both have the same number of blocks or does one of us have more blocks than the other?

C: You have more.

E: How do you know I have more? (Request for reasoning).

C: Same as before, your row is bigger.

E: Why do you not count the number of blocks in each row? (Suggestion is made to determine whether counting influences reasoning. The child counts nine blocks for each row).

E: How many blocks in your row?

C: Nine.

E: How many blocks in my row?

C: Nine.

E: Which row has more blocks or do they both have the same number of blocks?

C: You have more.

E: Tell me why I have more blocks than you have (Request for reasoning).

C: You have more blocks. They come out more (pointing to the ends of the Examiner's row).

At this point the interview was terminated, and one would conclude that the child had not yet developed, or was still pre-operational with respect to, term-to-term correspondence.

The Piagetian method of teaching in its true essence deals with individualized instruction with 1:1 pupil/teacher ratio and has been termed

as a clinical method. In order to incorporate it in the regular classroom system one has to weigh its feasibility considering the fact that, for most part of the time, the concepts taught in schools are already present in textbooks, the teacher has to cope with a heterogeneous grouping of children, where the ratio may be 1:50 or more, not overlooking constraints in infrastructure facilities, etc. So, within these inherent limitations in the teaching-learning process, can PMT be made applicable in the Indian schools? Researchers need to probe into this area. Some beginning perhaps could be made by identifying concepts from prescribed textbooks in content subjects in sciences, mathematics, social studies of a given class from primary school syllabus, evolving lesson plans based on the PMT format, teaching the concepts, with an effective support system and then critically analysing and evaluating the feasibility of PMT.

Research Evidence

Piaget-derived educational models have become prominent, particularly in early childhood education. The first model was developed by Celia Lavatelle and is referred to as "Piaget-based curriculum for children 4 to 7 years old". The second model of David Weikart called the "cognitively oriented curriculum" has designed the entire learning environment on the Piagetian Model. The third educational model is that of Kamii and DeVries and is known as "Piaget based curriculum for early childhood educa-

tion". Nearly all current research is relatively with young children. Despite differences among the Piagetian model builders on the structural aspects, there is a common consensus of agreement about the value of unstructured learning experiences, of play, the role of thinking, the de-emphasis of didactic instruction and the need to incorporate inquiry-oriented experiences. The feasibility of introducing PMT in the Indian school system needs to be studied by considering the peculiar features of our classroom situation.

Conclusion

Despite the explanatory appeal of information-processing models, the measurement of internal processes is a complex undertaking. Verbal reports of cognitive processes may be easy to obtain but can be misleading. But Bruce Joyce et al (1981) believed that teachers can learn one or two models in each family to build the repertoire required for flexible teaching. They completed a two-year examination of the ability of teachers to acquire new skills and report that most teachers can "fine tune" existing skills and master new models.

Today's education loads the child with diverse information which needs to be processed, i.e. integrated, reduced to categories, symbolically transformed, stored and retrieved subsequently. To facilitate all this, understanding of appropriate information-processing models and their applicability may serve to improve the teaching and learning experience as a whole.

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The New English Teacher

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IT has been generally agreed that English language is our major window to the world and a gateway to the twentieth-century thought and culture as it is the richest language in all branches of knowledge. Hence Dr. Radhakrishnan remarked: 'If under sentimental urges, we give up English, we would cut ourselves off from the living stream of evergrowing knowledge'. Making English just a library language will mean nothing short of accepting defeat in the teaching and learning of this language, on the one hand, and underscoring the functional role of English, on the other.

Review of the ELT Programme

There has been a general complaint in recent years about the continuous deterioration in the standards of teaching and learning English. Let us review our ELT programme. Are we really successful in our venture in terms of learners' achievement?

We teach English at the secondary level to enable the students to (1) understand, (2) speak, (3) read, and (4) write English correctly. In short, our broad objectives at this level are the development of LSRW which are considered to be the basic language skills in any ELT programme, if it is not ESP. We aim at LSRW so that our stu-

dents are able to communicate in English as and when they need to do so.

Now the question is whether our students really become proficient in the use of LSRW skills, whether they can communicate in English as and when they are required to. Probably there is no answer except to say "sorry". It is our misfortune that in spite of our best efforts and despite the army of trained teachers of English language being turned out by the education colleges, we have not been able to attain the desired results. Our failure in achieving the set objectives compels us to conclude that something is wrong somewhere. What is it? Where does it lie? The blame may squarely be put on either of the three:

1. Learners of English language
2. Tools of teaching English
3. Teachers of English

Lack of Motivation among the Learners of English

Let us examine them one by one. The teachers of English have been heard complaining that there is general lack of motivation among the students for learning English. Besides, the students have to learn English in unnatural and unconducive environment. The learners do not

get reinforcement either at home or outside. They are exposed to the language for a limited period which is fixed in their school time-table for the study of this language. This short period is not sufficient for acquiring functional skills in this language. The teachers are certainly correct in their assessment that the learner learns English only for a limited time during the twenty-four hours and unlearns it for the rest of the time. Undoubtedly, the learner gets more time to unlearn this language than to learn it. Obviously, the short period is insufficient for learning a foreign language like English as the teacher does not get sufficient time to give the required drills to the learner.

Lack of Technical Resources

Another complaint of the teachers of English is in respect of the inappropriate tools available to them for teaching this language. Most of the teachers have to teach English in the absence of modern sophisticated educational technology, developed for language learning, viz. language phones, tapes, tape-recorders, video tapes, language laboratory, etc.

Unsuitable Textbooks

On the other hand, their basic tools, i.e. textbooks are defective as they do not help much in the acquisition of essential language skills for communication. Instead of providing language learning items, they are crowded with information, irrelevant for the purpose of language learning.

Unrealistic Examinations

Moreover, the teachers of English have to work under a tight schedule. They are assigned courses which they have to finish in the stipulated time. Finishing the courses is the predominant concern of both the teachers and the students. This is because of the nature of our examinations which concentrate on the written aspect only. It is so because testing in the spoken

aspect of the language is not quite easy which may involve certain complications and pose some difficulties. Thus, our teaching priorities are dictated by the system of our examination. The result is that our students often leave schools unable to communicate in this important language.

Language Teachers and Non-language Teachers

All these complaints are valid and true. These are certainly the limitations under which our teachers are working at the present. These things are beyond the control of the English teachers. They are the concerns of the managers of Education. But let us also consider if some fault lies with the teachers of English, too. Do we really teach English as we should? Do we realise that our job as teachers of English language is different from that of non-language teachers? The fact is that we teach English as any other content subject. We seldom think that language is a skill-based subject and hence is quite different from knowledge-based subjects. When this is so, the students cannot really be blamed for considering English just as any other subject to be studied for passing the examination.

Language Teacher's Job

The first important thing to bear in mind as language teachers, is that language teaching has to be different from the teaching of non-language subjects because the teacher's concern in language teaching is not only to pass on knowledge but to help the learner acquire language skills that are involved in it. Secondly, we should teach language and not about the language. This requires that the teacher must devote more time to helping the learner acquire this language than loading him with information about the language. In language teaching, the job of the teacher does not end with just telling the rules about the language but he has to develop different communication skills among the learners.

Wrong Notion about ELT

Another important reason for our poor language teaching is the fact that all teachers of English are not specialists in their job. More often than not, the teachers without going through any specialized training in ELT are assigned this task. The administrators hardly realize this as an important pre-requisite. There is a wrong notion about ELT that all can teach it because everybody learns English at some stage or the other. The fact that learning a language is much different from teaching it is often ignored. The result is that such non-specialist teachers of English do their job in quite an unscientific and unskilled way. The poor teacher in ELT is generally not even aware of the latest developments in this field but has to do it because he has no other go. In these conditions we should not be surprised at the failure of our teachers in ELT. Specialization is the requirement of the age. We should make it compulsory in ELT also, if we really aim at better results in this field. Our ELP programmes have been suffering a lot on this count also.

Different Roles of English Teacher

The National Educational Policy clearly mentions that the role of the teacher will be of a facilitator in learning. This envisages that the teacher of English will have to play a three-fold role.

- (i) personal or social role,
- (ii) organizational role, and
- (iii) academic role.

Personal or Social Role

The first role of the English teacher calls for socializing himself with the class. Generally it happens that the teacher comes to the class and starts teaching abruptly. He asks the students to open their books and begins the lesson without even saying 'Hello' to his pupils. As a good teacher he should try to build a social rapport with his pupils as it helps in achieving better

results. It would make his teaching quite fruitful if the teacher of English socializes himself with the class. For that purpose the teacher may spend a couple of minutes in talking about the real events that occur in the class, in the place, outside the place, in the country and outside the country. The teacher should indulge in genuine conversation with his students, e.g. if a student named 'Ravi' comes late, he may ask some such questions: What do you think could have happened to Ravi? He is late again. He may also talk about topical events affecting the lives of his students, e.g. Did you have a good time this weekend? How about the cricket match played on Sunday?

Most of the teachers do not realise how useful this kind of genuine conversation is for the learners of a language. They fail to take the advantage of the opportunities the classroom offers for such interaction. This interaction would make the students familiar with some of the social functions of the language that may be useful to them in their future lives. An important question arises here: How can real communication take place in a foreign language class which seems to have an artificial, limited, and unstimulating environment for the language to function? One can ask whether it is possible to create a climate for communication. Yes, it is certainly possible if the teacher does not confine himself to his instructional role, mentioned above, and does justice to his social and organizational roles as well. For the first role, the teacher must break down the barriers and develop with his pupils a relationship based on equality and confidence. He should give up his privileges and consider himself as a member of the group with real right and duties. This means that if he wants to ask the students personal questions, he must also be prepared to answer the same kind of questions.

Organizational Role

Under the organizational role, the teacher may create situations for real communication, e.g.

- for polite requests

- giving reasons
- explaining sequence of events
- clarification
- accepting an offer/invitation
- declining an offer/invitation
- congratulating some one on a happy occasion
- expressing sorrow
- apologizing, etc.

All these are such functions of language as the students will find useful in their future life. The teacher may encourage his pupils to tell their personal stories and speak about their interests and problems. He may organize the students to play roles on different themes, leave them free sometimes and sometimes supervise them. Each student may be asked to give a short oral or written report on a topic of his interest. For this type of conversation the teacher may organize the students in different ways.

The interaction may be:

- between the teacher and the pupils
- among the pupils
- between one student and the class
- between a group and the class
- among different groups of pupils in and outside the class.

Academic Role

The third role of the teacher of English, i.e. the academic role, demands that he has to mould his instructional approach towards the teaching of this language. It means that he shall act as a helper to the learner in acquiring communicative skills as a useful vehicle for sharing his thoughts, feelings and experiences with others. Such skills are developed only through constant practice of the language needed at different situations. If only the teacher goes on talking, the students will not get sufficient opportunity for using the target language. It would simply make them passive listeners and they will not speak a word or write a sentence. Consequently, the learners will not acquire any language ability and the objectives of ELT will be defeated. The role of the facilitator

of learning requires the teacher to adopt effective strategies for presentation of the teaching material besides providing maximum opportunities to the learner to use the language needed for different occasions. Contextualization may be an effective approach in this regard. Role-playing, dramatization, the use of AV aids (picture at least), the use of newspaper clippings, etc. will certainly help the teacher in doing justice to his role of a facilitator of learning.

The academic role of the English teacher is of central importance in the ELT programme and hence demands a serious thought by the teacher. It would be quite fruitful if he addresses the three pertinent questions: Why? What? and How? to his own self before starting his lesson.

The first question, "Why?", requires the teacher to determine his objectives for each lesson from the learner's point of view. The most important thing for him to remember is that his academic role should not be similar to that of the content subject teacher. The teacher of English should ensure that each of his teaching activities contributes to the development of one of the four basic skills of language so that the learner acquires communicative competence in the target language which would enable him to handle language effectively as a vehicle for communication. He should also be clear in his mind regarding the utility of a particular language aspect from the learner's point of view and then select his teaching points accordingly. In short, our ELT programme has to be learner-oriented.

The second question, "What?", concerns the selection of the teaching materials. It means that the teacher of English should select his teaching points keeping in view the first question, i.e. "Why?" The teacher has to see that the teaching items will be genuinely beneficial to the learner. This calls upon the teacher to make a cautious linguistic analysis of the textual and non-textual blocks of teaching materials. Linguistic analysis means intelligent classification of linguistic items for regular teaching because unplanned teaching of the prescribed text will be of little

value to the learner from the viewpoint of achievement of behavioural objectives. The teacher of English should well understand that simply confining himself to the matter of the text will change the nature of his subject i.e. from a 'skill subject' to a 'content subject'. Hence he should give more importance to linguistic items than subject matter. Use of new vocabulary items and drilling of new phrase patterns should be the primary concern of the English teacher and the comprehension of the content should be the secondary concern.

The third and the last question, "How?", implies that after a careful selection and thorough analysis of his teaching material with reference to the specific objectives, the teacher should plan his strategies and techniques for presentation of the material so that the set objectives are achieved. The more effective the technique of presentations, the quicker the pace of language acquisitions. Here he should remember that language skills are acquired through proper drills. If the teacher adopts the lecture method, the students would not get any opportunity of using

the language actively. They would merely sit in the class listening to the word and the other three language skills would completely be ignored. Therefore he must plan his strategy for teaching each linguistic item in such a way that he may not be considered to be a slave to a particular method or approach. Each of his strategies must be learner-oriented, helping the learner to acquire the communicative ability. In short his approach must be pragmatic, elastic, and eclectic.

If the teacher satisfies himself with the answer to the three questions, he would be doing justice to his academic role.

To conclude, it may be reaffirmed that the teacher of English may contribute fruitfully in various ways to the creation of a climate which will certainly be conducive to real communication. This will not only be beneficial to the students but enjoyable and rewarding to the teacher himself. These are the expectations from the teacher in the New Policy on Education which lays emphasis on the teacher's role as a facilitator in learning.

Introducing Microcomputers in Senior Secondary Education

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COMPUTERS are used in every aspect of modern society in the Western world. As a result, to make students computer literate, microcomputers and Computer Studies have rapidly become established as part of the curriculum in most secondary schools. It is an examination subject for the 14+ level (9th and 10th year of schooling) and the 16+ level (11th and 12th year) pupils in the developed world [1-4]. Computer Studies has been taught as an examination subject at the 16+ level for well over 20 years in the British curriculum [1]. The new General Certificate of Secondary Education (GCSE) of Britain also advocates teaching Computer Studies subject for the 14+ level.

Most developing countries have made an extremely slow start in the use of computers. There are a number of reasons for the lack of widespread use of computer in the Third World. Among other reasons a lack of local expertise and shortage of finance are important.

With the advent of low cost but powerful microcomputers, it is economically viable to introduce computers in various aspects of life. To create computer awareness and computer literacy, some of the developing countries are introducing microcomputers and computer studies courses in the secondary schools [5-7].

India is in the forefront of technology among the Third World countries. The use of computers is rapidly expanding in India. Hence, the Indian Government has decided to introduce students, at school stage, to the world of computers. In 1985, the Central Board of Secondary Education (CBSE) of India introduced Computer Science as one of the elective subjects for Senior School Certificate (SSC) Examination for the 16+ level pupils (11th and 12th). This paper describes the implementation scheme and performance analysis of teaching Computer Science in an Indian senior secondary school. The research study also covers the issues involved in the selection and

installation of microcomputers, students' selection criteria and students' performance in Computer Science.

The Research Design

The School Under Survey

In Bahrain there are two sets of schools: government controlled Arabic-oriented public schools [7], and privately funded English-oriented schools for the children of Asian and European expatriates [6]. This study covers the Indian School, Bahrain. The school follows the Indian curriculum and has a student strength of over four thousands. The students are mainly of Indian origin (about 80 percent), although other Asian and Arab children are present. It offers education at three levels: Elementary (preparatory to 5th standard), Secondary (6th to 10th) and Senior Secondary (11th and 12th). The medium of instruction is English, while the major studies are Mathematics, Science, Commerce and Humanities.

The Survey and Methodology

Interviews, questionnaires and observations in the school were the primary means of data collection. Some information was gathered from the written documents about computing from school administration and Central Board of Secondary Education (CBSE) guidelines for teachers and Computer Science curriculum. This research study covers a period of over three years.

The school administration established the initial contact with the first author in April 1985 about the possible introduction of microcomputers and Computer Science course in the school curriculum. Since then the author was actively involved in the implementation scheme of Computer Science programme. The second author was involved in starting and teaching Computer Science in the school since October 1985.

The information was collected in the following areas:

- a. Implementation scheme for computer science subject.
- b. Procurement of computer resources.
- c. Location and arrangement of microcomputer laboratory
- d. Criteria for selection of students.
- e. Viewpoints of students about computer science.
- f. Students' performance in computer science compared to other subjects.
- g. Viewpoint of school teachers.
- h. Viewpoint of the management.

Findings and Discussion

Implementation Scheme for Computer Science Subject

In April 1985, the Indian School management formed a computer committee comprising professionals from the local University and industries. It was to suggest the possible course of action to be followed to introduce Computer Science as one of the elective subjects in senior secondary classes (11th and 12th standard). The committee made the following recommendations:

(i) *Syllabus*: Worked out the weekly breakdown of the syllabus and possible laboratory assignment within the limits prescribed by the CBSE. The syllabus comprises mainly application areas of computers, computer hardware and software systems, BASIC programming and word processing.

(ii) *Type and Number of Microcomputers*: It was recommended to provide each student access to one microcomputer during laboratory sessions for optimum learning. There should be a batch of 15 students in one classroom for better supervision by the teacher. It was agreed to purchase 15, 8-bit microcomputers with at least one disk drive and one printer.

(iii) *Appointment of a Qualified Computer Teacher*: A recommendation was made to appoint an experienced teacher for the subject with the following qualifications: M.Sc. or B.Sc. with Physics,

New materials to be developed should be well planned in this respect.

(b) *Image of Women*: Educational materials should not only remove negative bias and stereotyping of role for women, they should project a positive image of women and their role in the development of societies.

(c) *Educational and Vocational Guidance Materials*: Educational materials should include a lot of guidance tools such as occupational information literature, interest inventories, aptitude tests, etc. These should also be free from gender-bias.

4. Teachers' Training and Classroom Teacher Practices

(a) *Teachers' Training in Vocational Guidance Skills*: Teachers' training programmes should be expanded to have more personnel trained for preparing girls for careers in Mathematics, Science and Technology.

(b) *Selection and Orientation of Teacher-trainees*: Teachers' training should lay due emphasis on the specific needs of girls and changed perceptions of gender stereotypes, and on the need to be more aware and sensitive towards this particular issue. They should be encouraged to assign leadership roles and manual tasks to girls in their day-to-day interaction with students.

5. Non-formal Vocational Training

(a) *Identification of Needs of Out-of-School Girls and Women*: Non-formal Education Units, Technical and Vocational Units, Ministries of Education and Employment and Women's organizations should undertake surveys to identify educational and vocational needs of out-of-school girls and women.

(b) *Provision of Facilities*: Depending upon the specific needs of out-of-school girls and women, appropriate teaching and curricular facilities should be made.

To conclude, women's status and role in our society need to be enhanced through promoting awareness of their contribution in all walks of life. There is also a need for increasing understanding of the changing status of women and their equal rights in the area of education and employment. Inculcating proper attitudes among educational and employment personnel to recognize their professional and social obligation, providing equal opportunities for girls and boys in education and employment, having trained teachers and guidance personnel to identify and look after the career needs of girls, and preparing required instructional and educational materials for career guidance of girls are among the important strategies to increase career awareness and career potential of girls.

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Private Costs in Distance and Conventional Education in India

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DISTANCE education has been in existence for well over one-and-a-half century. It has already occupied an indispensable place in the educational system at the global level. However, the germination of distance education in India took place in the early 1960s. Its growth in India has been at a very slow pace. In fact, it did not grow much till the mid-70s. It is only during the last ten years or so that it has come to occupy an important place. Even now it is being imparted mainly through postal correspondence.

For quite a long time, the distance educational system has been opposed by the protagonists of the conventional educational system. There is, however, a sea-change in their outlook now. The distance educational system is going to be popularised day by day. This is, in fact, a historical necessity. Face-to-face education is no longer indispensable in the context of higher education. To "earn while you learn" can be possible only in the distance educational system.

Distance education has a very vital role to play in meeting the challenge of the future in the context of number, time and finances. It is not only an academic and a forward-looking teach-

ing-learning system but also a non-formal, democratic, flexible and economical one. It is as good or bad an academic discipline as the traditional system of education is. However, the "fat intellectuals" and a certain section of society are yet to reconcile with the pedagogic validity of distance education. In fact the distance educational system is a better method of imparting education when it goes beyond the domain of traditional courses.

In a country like India, where the literacy rate is as low as 36 per cent, a huge amount of funds is required to raise the literacy rate. The absolute number of illiterates is rather enormous. The situation on the higher education front is rather grim. In this context, India lags far behind than the countries like South Korea, Japan, the Philippines, the USA and the USSR. Moreover, the demand for higher education is going to be higher and higher in future. Even a moderate estimate for 2000 AD indicates that the likely enrolment in higher education in India is expected to be doubled. Our existing institutions of higher learning will not be able to cope with this expected rise in demand for higher learning. At

the same time, the financial constraints in terms of our limited economic resources may not allow us to expand the existing institutions and to open up new institutions to meet the ever-increasing demand for higher learning. However, a democratic state like India is supposed to create educational infrastructure to meet an ever-rising demand. In such a constrained situation we shall have to think of an alternative system which may supplement the existing efforts. The distance educational system is one such alternative. Not only is distance education relatively less costly than conventional education but it has also the potential to transcend the barriers of time and scale. It seems to be an adequate measure to cater to the diverse needs of the society, in general, and to the individual learner, in particular.

Various higher level committees have made strong recommendations for the initiation and promotion of distance education in India. The establishment of the Indira Gandhi National Open University and a number of State Open Universities shall further strengthen the network of distance education in India.

Distance education is relatively less costly than conventional education. Conventional education is becoming dearer day by day both for the individual learners and for the society as a whole. So much so, that higher education in the conventional system is going to be out of reach of the common individual. The average cost per student in higher education through distance education is found to be one-third of the cost in regular traditional institutions the world over. Economies of scale, less expenditure on academic staff and small amount of private expenditure are some of the important financial advantages of distance education.

Some studies have already been conducted in the context of social or public costs in the formal and non-formal systems of education². However, very few studies are available on the comparative study of private costs in the conventional and non-conventional systems of education³. The present paper is a modest

attempt to study and compare private costs in both the systems. The study is highly relevant in the sense that we can have a comparison of private costs in both the systems of education and thereby draw certain conclusions and policy implications for the educational system in general and for distance education in particular.

Costs of distance education may be divided into two broad categories: (a) social or public costs which are borne out by the society as a whole; (b) private costs which are borne out by the individual learner.

Objectives

The main objectives of the study were:

1. To study private costs of distant learners;
2. To study private costs of learners in conventional education,
3. To compare private costs in both the systems,
4. To see which system is cheaper: on what account and to what extent.

Hypothesis

Distance education at the higher level in India is relatively less costly than conventional education, on private account.

Methodology

The study was based on a survey. One hundred students from both the systems were selected with the help of stratified random sampling. All the students were enrolled with the Punjabi University, Patiala. Of the one hundred students, 50 were from distance education and 50 from conventional education. In the sample from distance education 50 per cent were employed and 50 per cent unemployed. Out of the unemployed students, 13 were local and 12 were out-stationed. All the employed students were out-stationed. All the sampled students in distance education attended two personal contact programmes (PCP), each of nine days. The PCPs were conducted at Patiala only. As regards the

sampled students from conventional education, half of them were day scholars and the remaining half were resident scholars. All the day scholars were from Patiala itself.

The data collected related to the academic session 1987-88 but were collected during 1988-89. The sampled students were studying in M. A. Part II, in both the systems of education, during the academic session 1988-89. They gave information regarding the various types of costs on the basis of the expenditure incurred by them in the previous academic year, i.e. 1987-88.

The main cost components taken into consideration were tuition fee, examination fee, expenditure on books and stationery, xeroxing of reading materials, travel costs, board and lodging costs, private tuition, postal expenditure, opportunity costs, etc. It seems relevant to mention here that costs in this study are in terms of monetary costs on current prices. Further, all the costs are annual costs. The expenditure on board and lodging incurred by the resident learners in conventional education has been taken into account because they are incurring this expenditure only because they are getting education in the formal system and that too as resident scholars. However, the expenses incurred by them on clothing, etc. have not been taken into account. On the contrary, the expenditure on

board and lodging incurred by the day scholars and the learners in distance education (except during the PCPs) has not been taken into account because they were to incur this expenditure even otherwise. Similarly, the expenses incurred by them on clothing, etc. have not been taken into account. In other words, only those expenses have been taken into account which were directly related to their education.

Discussion

To test the stated hypothesis, a comparison of private costs has been made in both the systems.

A comparison of unit private cost (UPC) in distance and conventional educational systems is given in Table 1. The table indicates very clearly that the UPC in respect of all the cost components, except postal expenditure and private tuition, is quite low in distance education as compared to conventional education. The UPC difference is quite spectacular in the case of board and lodging. It is to the tune of Rs 3925.00. The UPC on this head is a little more than 15 times in conventional education (CE) as compared to distance education (DE). Similarly, the travel cost is more than double in the case CE as compared to DE. The expenses on stationery in the case of CE are more than one and a half times

TABLE I
Comparison of UPC in Distance and Conventional Education

Cost Component	(Rupees per annum)		
	Conventional Learner (CL)	Distant Learner (DL)	Difference (CL - DL)
Tuition fee	600	540	60
Examination fee	60	54	6
Books	280	220	60
Stationery	250	150	100
Xeroxing of reading material	125	15	110
Travelling	315	145	170
Board and lodging	4200	275	3925
Private tuition	—	300	-300
Postal expenditure	—	45	-45
Total	5830	1744	4086

Note: UPC — Unit Private Cost; CL — Conventional Learner; DL — Distant Learner

as compared to DE. However, the expenditure on postage and private tuition is nil in the case of CE whereas it is Rs 45.00 and Rs 300.00, respectively, in the case of DE. In fact regular classroom students do not have any need to spend on postage and private tuition, thanks to regular contact with the teacher. However, even if we deduct the expenses on postage and private tuition from the total expenses incurred by a regular classroom student, the UPC is still very large in conventional education. The difference is nearly of Rs 4100.00. The overall UPC in distance education comes out to Rs 1744.00 as compared to Rs 5830.00 per annum in the case of conventional education. In other words, the UPC in distance education is less by more than one-third of the UPC in conventional education or the UPC in conventional education is higher by more than three time than that in distance education. Table 1, thus, supports our hypothesis that private cost in distance education is substantially low as compared to private cost in conventional education.

Besides the above said costs, an effort has been made to estimate opportunity cost only in the case of employed distant learners. It has come out to be Rs 390.00 during the full one year

mainly in the form of half pay leave which they had to take for educational purposes. They used half pay leave only for attending PCPs. If we deduct the opportunity cost (Rs 390.00) from the average annual earnings (Rs 23280.00) of the employed distant learners then we are left with only Rs 22890.00 as net earnings per annum per learner.

Let us now compare the UPC between various categories of conventional and distance learners. Table 2 illustrates a comparison of the UPC between day scholars and unemployed distant learners. The UPC in the case of outstation DLs on every account, except private tuition, is higher than that in the case of local DLs. Day scholars did not spend any money on board and lodging, private tuition and postage. Thus the UPC on these three accounts is zero in the case of day scholars. On all other accounts the UPC is higher in the case of day scholars. The total UPC in the case of distant learner and day scholar is Rs 1577.00 and Rs 1539.00, respectively, which indicates that the UPC in the case of the latter is lower by Rs 38.00 as compared to a distant learner.

The difference of the UPC between day scholars and outstation DLs is even higher. The

TABLE 2
Comparison of UPC between Day Scholars and Unemployed Distant Learners (DLs)

Cost Component	(Rupees per annum)				
	(1) Day Scholars	(2) Distant Learners			Difference (1 - 2)
		Local DLs	Outstation DLs	Average	
Tuition fee	600	540	540	540	+60
Examination fee	60	54	54	54	+6
Books	312	179	319	249	+63
Stationery	223	125	155	140	+83
Xeroxing of reading material	134	12	16	14	+120
Travelling	210	100	166	133	+77
Board and lodging	—	—	250	125*	-125
Private tuition	—	350	250	300	-300
Postal expenditure	—	—	44	22*	-22
Total	1539	1360	1794	1577	-38

* Though the average in this case is not that meaningful, yet it has been worked out to compare it with average expenditures of day scholars

UPC in the case of the farmer is lower by Rs 255.00. However, the UPC in the case of day scholars as compared to local DLs is higher by Rs 179.00. This is mainly because of higher expenditure on books, stationery, xeroxing of reading material and travelling by the day scholars.

Table 3 compares the UPC between resident scholars and unemployed distant learners. The UPC in the case of resident scholars comes out to be Rs 5921.00 as compared to Rs 1577.00 in the case of distant learners. This means that the UPC in the case of former is higher by 3.75 times as compared to the UPC in the case of the latter. Though the UPC on almost every account, ex-

cept private tuition and postage, is higher in the case of resident scholars, yet the main contributing factor is expenditure on board and lodging.

A comparison of the UPC between day scholars and employed distant learners is given in Table 4. The UPC in the case of former on all accounts, except postage and board and lodging, is higher than that in the latter. However, the total UPC in the case of day scholars is higher by Rs 75.00 than the UPC in the case of employed distant learner. Here we have not taken into account the earnings of the employer DLs. Their average annual per capita earnings were Rs 23280.00. Had they got the same education

TABLE 3
Comparison of UPC between Resident Scholars and Unemployed Distant Learners (DLs)

Cost Component	(Rupees per annum)				
	(1) Resident Scholars	(2) Distant Learners			Difference (1 - 2)
		Local DLs	Outstation DLs	Average	
Tuition fee	600	540	540	540	+60
Examination fee	60	54	54	54	+6
Books	248	179	319	249	-1
Stationery	277	125	155	140	+137
Xeroxing of reading material	116	12	16	14	+102
Travelling	420	100	166	133	+287
Board and lodging	4200	—	250	300	+4075
Private tuition	—	350	250	300	-300
Postal expenditure	—	—	44	22	-22
Total	5921	1360	1794	1577	4344

TABLE 4
Comparison of UPC between Day Scholars and Employed Distant Learners (DLs)

Cost Component	(Rupees per annum)		
	(1)	(2)	Difference (1 - 2)
	Day Scholars	Distant Learners	
Tuition fee	600	540	+60
Examination fee	60	54	+6
Books	316	191	+121
Stationery	223	160	+63
Xeroxing of reading material	134	16	+118
Travelling	210	157	+53
Board and lodging	—	300	-300
Private tuition	—	—	—
Postal expenditure	—	46	-46
Total	1539	1464	75

through the conventional educational system these earnings would not have been there. In that case they would have incurred a loss of Rs 23280.00 per annum. Their total UPC would, thus, have been (Rs 23280 + 1539) Rs 24819, had they got education as day scholars and (Rs 23280 + 5921) Rs 29201 had they got education as resident scholars. The difference of the UPC would thus have been (Rs 24819 – 1464) Rs 23355 in the former case and (Rs 29201 – 1464) Rs 27737 in the latter case and not merely Rs 75 00 and Rs 4457.00 (see Table 5), respectively. In the former case, the UPC in conventional education would have been higher by nearly 17 times as compared to distant learners and in the latter case it would have been higher by nearly 20 times as compared to distant learners.

Table 5 gives a comparison of the UPC between resident scholars and employed distant learners. In the case of resident scholars the UPC on all accounts, except postage, is higher than the UPC in the case of employed DLs. The total UPC in the case of former is higher by Rs 4457.00 as compared to the latter. In other words, the UPC in the case of resident scholars is higher by a little more than four times as compared to the UPC in the case of employed DLs. This is the situation when we do not take into account the income from their employment. We have already discussed the case by taking the income from their employment.

A comparison of the UPC between employed and unemployed distant learners is shown in Table 6. Unlike the previous tables, this table

TABLE 5
Comparison of UPC between Resident Scholars and Employed Distant Learners (DLs)

Cost Component	(Rupees per annum)		
	(1) Resident Scholars	(2) Distant Learners	Difference (1 – 2)
Tuition fee	600	540	+60
Examination fee	60	54	+6
Books	248	191	+57
Stationery	277	160	+117
Xeroxing of reading material	116	16	+100
Travelling	420	157	+263
Board and lodging	4200	300	+3900
Private tuition	—	—	—
Postal expenditure	—	46	–46
Total	5921	1464	4457

TABLE 6
Comparison of UPC between Employed and Unemployed Distant Learners

Cost Component	(Rupees per annum)		
	(1) Employed DLs	(2) Unemployed DLs	Difference (1 – 2)
Books	191	249	–58
Stationery	160	140	+20
Xeroxing of reading material	16	14	+2
Travelling	157	133	+24
Board and lodging	300	125	+175
Private tuition	—	300	–300
Postal expenditure	46	22	+24
Total	870	983	–113

does not contain two cost components, viz. tuition fee and examination fee. The UPC of employed distant learners on books and board and lodging is lower than that of unemployed distant learners. On all other accounts, the employed distant learner spends more than the unemployed distant learner. However, the total UPC of employed DLs was Rs 870.00 as against Rs 983.00 of unemployed DLs on all the items listed in Table 6. It means that the UPC of unemployed DLs was higher by Rs 113.00 or as compared to that of employed DLs. Thus, it is interesting to note that unemployed DLs spent more (on an average) than the employed DLs.

We have discussed and compared the unit private cost (UPC) in respect of distant and conventional learners. In all we divided the learners into four categories, viz. unemployed distant learners, employed distant learners, regular day scholars and resident scholars. The UPC in respect of all these cases has been Rs 1577.00, Rs 1464.00, Rs 1539.00 and Rs 5921.00, respectively. However, the combined UPC of distant learners, on the one hand, and conventional learners, on the other, has been Rs 1744.00 and Rs 5830.00, respectively. The UPC in respect of unemployed local distant learners and unemployed outstation distant learners has been further computed separately. It has been Rs 1360.00 and Rs 1794.00 respectively.

The difference between the UPC in the case of unemployed DLs and regular day scholars is very small. The UPC of the former is higher by Rs 38.00 as compared to the UPC in the case of the latter. Nevertheless, the UPC of local DLs is lower by Rs 179.00 per annum. It is interesting to note that outstation DLs prefer distance education to conventional education in spite of the fact that they bear a higher cost to the tune of Rs 255.00 per annum. The UPC difference between resident scholars and unemployed DLs is to the tune of Rs 4344.00 per annum. It is higher by 3.75 times in the former as compared to the latter. The difference of the UPC between day scholars and employed distant learners is not

very high. The UPC in the former is higher by Rs 75.00 per annum as compared to the UPC in the latter. The UPC of resident scholars as compared to that of employed DLs is higher by four times. It is very interesting to note that the UPC of unemployed DLs is higher by Rs 113.00 per annum than that of employed DLs.

The family income (or income from employment) of the various learner-groups varies as follows. In the case of unemployed DLs family income ranges from Rs 6,000.00 to Rs 48,000.00 per annum. The income of employed DLs, their earnings from employment only, ranges from Rs 5,400.00 to Rs 48,000.00 per annum. The family income of day scholars ranges from Rs 10,000.00 to Rs 60,000.00 and that of resident scholars ranges from Rs 24,000.00 to Rs 50,000.00. It is interesting to note that the income range of unemployed DLs and employed DLs is almost the same. However, the first group of students is wholly dependent on their parents whereas the latter group is self-dependent. As regards the lower limit of the income of day scholars' families, it is lower than the lower limit of resident scholars' families. The same is the case in respect of higher limit of income.

When enquired why students in the two educational systems had joined the respected systems, they answered differently. Non-availability of suitable jobs after graduation, better competitive capacity for higher jobs, high quality education, parents' capacity to afford expenses, etc. were some of the reasons stated by the students, in the conventional system. In addition to these reasons, female students joined the university for better matrimonial prospects. Promotion in the present jobs, scramble for better employment opportunities, unable to join the conventional educational system due to time constraint or financial constraint, or simply to acquire higher education for the sake of getting higher qualifications, etc. were some of the important reasons stated by students in the distant educational system.

However, a sizeable majority of the sampled students were not satisfied with the curriculum of the course. They felt that the curriculum was not relevant to the Indian socio-economic conditions. Almost all the students were uncertain about their future. In the face of the serious unemployment problem the opportunity cost of the learners in the conventional educational system and that of the unemployed DLs is near zero. The students in the conventional system, particularly the resident scholars, felt that the educational system was very costly and majority of them faced financial crisis.

Conclusion and Policy Implications

The conclusion drawn from the above discussion is that conventional education is very costly as compared to distance education. The study, thus, supports the stated hypothesis. However, the most expensive head in conventional education is that of board and lodging. It is very interesting to note that if we deduct the cost of board and lodging from the total UPC of resident scholars it comes out to be

Rs 1721.00 which is very near to the UPC of unemployed outstation distant learners. Anyway, it is still higher than the UPC of day scholars and local distant learners and distant learners combined. The UPC difference in the case of distant learners and day scholars is, however, not very substantial. Anyway the UPC in conventional education is higher than that of distance education. This combined with the social or public cost, which is substantially higher in conventional education as compared to distance education, makes conventional education all the more expensive.

Keeping in view the lesser public private costs of distance education, the financial constraints of the Indian economy, the ever-rising demand for higher education and the rapidly growing population, distance education would be the most suitable system of education. It has, in fact, become a historical necessity. The future of Indian education lies in distance education. We should, thus, make earnest efforts to improve, extend and strengthen the distant education network in the country.

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Road Safety Education at School Level: A Bare Necessity

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EDUCATIONAL institutions impart knowledge. The path which leads to these institutions is determined by road. Both educational institutions and roads bring together children, youths, adults and elders on the day-to-day business of contending, learning, working hard, having fun and overall growth. Also educational institutions and roads play an important part in building up infrastructure for the overall develop-

ment of a region. Therefore, it is essential to have some idea about road behaviour, besides educational institutions.

A study by the National Transportation Planning and Research Centre shows that every four minutes, a person is either killed or injured in road accidents in India. In 1974, 13,917 were killed in road accidents. This figure increased to 33,643 in 1984 with an annual average increase

TABLE I
All-India Vehicle Population, Accidents and Casualties (1974-1984)

Year	Number of Vehicles	Number of Accidents	Number of Persons	
			Injured	Killed
1974	2,327,064	114,310	76,650	13,917
1975	2,472,353	116,810	77,020	16,858
1976	2,699,598	124,662	82,547	17,788
1977	3,260,118	135,362	95,575	20,138
1978	3,613,708	146,282	99,413	21,811
1979	4,058,969	144,394	1,02,916	22,595
1980	4,513,986	153,227	1,09,147	24,646
1981	5,173,013	161,168	1,14,011	27,965
1982	5,844,493	167,534	1,26,321	30,007
1983	6,718,539	178,636	1,36,611	31,897
1984	N.A.	191,908	1,53,732	33,643

Source: References (4) and (6)

N A. — Not Available

of 11.89 per cent. Table 1 gives a summary of road accidents in India

India ranks first in the accident hazards in the world today. The fatality rate per 10,000 vehicles is 45 in India, compared to 1.8 in Japan, 2.7 in Sweden, 3.6 in the UK and 4.6 in France. From Table 1 it can be clearly seen that about 30,000 people are killed every year (i.e., in recent years), while another 1,30,000 are injured in various degrees. In India, on an average, over 450 road accidents are reported to occur every day, leading to 80 persons being killed and over 350 injured. The Road User Cost Study has evaluated the cost of road accidents in India as Rs 237 crore in 1978. Table 2 gives the future estimated number of accidents, fatalities and injuries for India up to the year 2001 AD.

TABLE 2
Estimated Number of Accidents and Casualties
for India (1990-2001)

Year	Number of Accidents	Number of Fatalities	Number of Injuries
1990	256,287	55,387	207,680
1991	268,916	59,820	220,412
1992	282,167	64,608	233,925
1993	296,071	69,780	248,265
1994	310,660	75,365	263,486
1995	325,968	81,398	279,639
1996	342,030	87,913	296,782
1997	358,884	94,949	314,977
1998	376,568	1,02,549	334,287
1999	395,124	1,10,758	354,780
2000	414,594	1,19,623	376,530
2001	435,023	1,29,198	399,614

Source: Reference (12)

In India, certain agencies like Traffic Engineering, NTPC, CRRI, Police Departments, Clubs, few schools, etc. have made serious efforts to understand and tackle the increasing problem of road accidents and injuries through seminars, discussions, publicity posters, etc. But the magnitude of the problem is such that a mass educative-participative strategy is essential by involving all the educational institutions, people and media.

Accident risks are higher on urban roads than on rural roads. Urban roads claim about 75 per cent of the accidents occur, of which 40 per cent are reported from four big cities, namely Bombay, Calcutta, Delhi and Madras alone. The rate at which urbanisation is increasing and with immense growth in the number of vehicles, the problem of road safety has assumed further importance. The problem of road accidents in our country is, by and large, a problem of human behaviour, besides the condition of the roads and the vehicles. Human behaviour is by far the most important factor for road safety. Road safety requires multi-disciplinary coordination of road and traffic engineering, medical, psychology, sociology, educational technology, law, etc in addition to general mass awareness. Education, training, publicity and enforcement are therefore the four major ways in which attempts can be made to improve human behaviour on the road.

In this paper, an attempt has been made to highlight the role of education in promoting road safety.

Concept of Road Safety Education

Road safety education is quite a new concept which demands recognition in our educational institutions. Educational institutions can play a very vital role in creating road safety consciousness among people. All of us, in the present-day world, are exposed to traffic environment both as passengers and pedestrians. Road safety education aims at providing information about traffic rules and regulations and developing right kind of skill, attitude and behaviour for using the road either as a pedestrian/passenger/driver of a vehicle.

Accident in general means an unforeseen or unexpected event which happens by chance. The World Health Organisation (1957) has defined the term 'accident' as "an unpremeditated event resulting in a recognisable enquiry". Gordon defined accidents as resulting from the total forces involved in the competition between man and his environment. Whatever be the definition of

the term 'accident', road accidents pose a very serious problem in the present-day world. The combination of the road, the vehicle in all its variety and the pedestrian constitutes a system which determines the total road traffic environment and the safety of operations.

According to D. Sanyal, "Traffic education is that branch of science which trains and teaches a user to perform the basic tasks like control, guidance and navigation with the highest degree of safety, efficiency and economy". Road safety education/traffic safety education can thus be defined as "a complex activity/task to educate all types of road users, irrespective of age, effectively and thoroughly for a safe road behaviour depending upon the environmental situation they live in".

Objectives of Road Safety Education

Road safety education seeks to eliminate/check road accidents totally or partially by imparting necessary education to the road users. The role of education in road safety is to increase safety and to save lives effectively, thereby ensuring a degree of road safety. The degree of road safety must be related to the risk and consequences of a road accident. For example, it is reasonable to assume that the risk of collision between two opposite-directed heavy vehicles on a very narrow road is similar to that on a very busy and congested road where pedestrians and different types of light and heavy vehicles are in motion; the consequences could be very different. On a very busy and congested road either pedestrians or vehicles or road-side objects can be affected by one another. If the probability of a serious collision occurring is x , then the risk of a fatal accident between two neighbours is basically $3x$. Hence it is our duty to reduce the accident risk by improving the degree of road safety. But, how? Answer to the question is not easy. One of the techniques of road safety is to educate the road users for their own safety. The next question arises in one's mind is, How to educate? Answer to this question is complex in nature.

The first and foremost task would be to win the participation of the mass people in reducing the road accident menace. This can be achieved with the application of multimedia like TV, radio, films, print, folk art, a subject in the educational institutions, demonstrations, seminars, etc. which come under the purview of education and educational technology.

The important aim of road safety education is to create awareness about the accident problems occurring on the road. Road safety education is specially needed for children, besides adults. In Delhi, for example, children fatalities in road accidents were 503 in 1972 and in 1983 it rose to 1156. Youths in the age-group of 20-29 years in Delhi (1979) are more victims of accidents which accounts for fatalities numbering 45 in total. "Accidents are not only the distressing consequence of an unsafe road traffic environment; danger generates the fear of an accident, both in travellers themselves and in other people on their behalf, for example in parents of the children. The accident statistics show that pedestrian and cyclist casualties constitute up to 70 per cent of fatalities in certain metropolitan cities of India, reveal nothing of the suppression of travel desires of school-going children nor do they indicate frustration and general unpleasantness that increasing motor traffic has brought about"¹. Hence, we can say that the formulation of goals and objectives for road safety education is of utmost essential.

The objectives of road safety education are safety, security, convenience, comfort, recognition and selection of safe situations, familiarisation with traffic rules and regulations, development of traffic consciousness amongst students and people and learning of causative factors of road accidents.

Road Accidents

In order to realise the need for formulation of goals and objectives of road safety education, let us briefly discuss about road accidents.

(a) Types of Road Accidents

Road accidents may be of the following types:

- (i) Fatal accidents
- (ii) Serious accidents
- (iii) Minor accidents
- (iv) No-injury accidents
- (v) Property damage accidents

(b) Causes of Road Accidents

Road accidents are caused not intentionally but they happen due to complex interactions of induced conditions based on the following:

- (i) Road condition—Bad alignment, bad surface, sharp curves, steep gradient, short-sight distance, absence of super-elevation in curves, etc.
- (ii) Vehicle condition—Weak brake, insufficient headlight, absence of wiper during rains or fog, etc
- (iii) Improper checks of vehicles—Absence of periodical checks of vehicles carried out by an authority with dedication.
- (iv) Driving licence issuing authority—Improper tests and sometimes without tests licences are issued.
- (v) Driver—Lack of concentration, sometimes because of the influence of liquor, driving even when feeling tired or sleepy, etc.
- (vi) Environment.
- (vii) Excessive speed on the curve/misjudgement of the curve condition.
- (viii) Climatic conditions.
- (ix) Ignorance of traffic signals and rules.
- (x) Behaviour of the road users.
- (xi) Natural calamities like landslides, floods, etc.
- (xii) Cattle, stray dogs on the road.
- (xiii) Overtaking vehicles without getting green signal from the driver of the vehicle ahead or without realising the speed of the vehicle ahead in opposite direction. Sometimes, overtaking in

curves where sight distance is insufficient

- (xiv) Negligence of traffic control personnel on duty.
- (xv) Absence of or fade traffic signs.

To cope up with the road accident hazards, mental alertness is of prime importance for both pedestrians and drivers at all times. For example, when a driver perceives a danger, he reacts to it. The time taken to perceive and his decision for action, etc. all depend on his general socio-economic status, temperament, psychological built-up, capacity to absorb worries and pains, and alertness. These factors together are termed as PIEV —

P—Perception: Process of perceiving the sensations through eyes, ears and nervous system.

I—Intellect: Identification of the stimuli by the development of new thoughts and ideas.

E—Emotion: Process of decision-making after P and I.

V—Volition: Will to react to a situation.

(c) Aspects of Road Accidents

Roads accidents involve three major aspects. They are:

- (i) Loss of lives and grievous injuries.
- (ii) Economic loss to individuals, community and nation.
- (iii) Hazards caused due to accident of the carriers of different chemicals and explosives.

Hence we can say that road accidents are caused by a number of factors related to the road, the vehicle and the user. As human beings are social, rational and sensible, it would be easy to build self-awareness in the following areas—appreciation of traffic accident problems, knowledge of traffic rules and vehicle operation techniques.

Road Safety Education Approach

In a road safety programme the four Es approach plays a major role.

Education—refers to the process of clarification of doubts into modified behaviour of the individuals through proper theoretical and practical training in developing road culture.

Engineering—refers to the efficient designing of roads, sidewalks, markings on the road and other essential facilities for the road users and maintaining conducive environment

Enforcement—refers to guiding the road users with appropriate traffic rules, regulations and laws under certain conditions for maintaining overall safety of the road system.

Evaluation—refers to the process of obtaining information and using it to form judgments which in turn are to be used in decision-making.

Here the main concern is with the education approach in building safe road environment for the children and the adults through proper training and education. Education is the most important tool for bringing about a change in the behaviour and attitude of individuals.

Road Safety Education Programmes in Schools

Under the stated goals and objectives of road safety education, a programme in school needs to be chalked out to develop desirable attitude and behaviour among school-going children who, in turn, can educate others for developing an accidentless road culture. The road safety education programme needs to be included in the school curriculum. The programme must be practical, value-oriented and need-based in everyday life situation.

Dr. Joho of the Swiss Bureau for accident prevention prescribed a curriculum for education in

traffic safety for children at various school level as below:

Kindergarten Pupils: How to walk in the street, to use the sidewalk, preferably use the left-side of the street, never jump or run across the street.

Grade 1 to 3. Rules for pedestrians: In broad outline, traffic signs and regulations, rules for driving, routes to and from school.

Grade 4 to 7. Rules for riding, rules to be followed by the pedestrians, riders and drivers at crossings, thorough instruction on road signs and traffic regulations.

Grade 8 to 9: School patrol service, helpfulness in road traffic, thorough instruction on rules for riding and driving, road signs and traffic regulations, statistics of road accidents. Dr. Joho adds that the teachers should of course pay due attention to whether the pupils are used to traffic in towns or open road traffic.

The road safety education programme in our country needs to be formulated in such a way so that it does not become a burden to the school students and it suits the Indian conditions. A curriculum for road safety education in schools may be formulated considering both theoretical and practical aspects. The programme for road safety education may include the following:

Lower Primary Stage—Acquainting with types of roads and vehicles in general, method of walking in the street, using the sidewalk; not to jump or run across the street and bad effect of throwing oily substances, vegetables or waste products on the street.

Higher Primary Stage—Acquainting with all types of roads and vehicles; introduction of traffic signs and regulations; stress on acquisition of knowledge, ability to think logically, draw conclusions and to make decisions, introduction to traffic signals (both automatic and manual), zebra crossing; routes to and from school or any place; developing civic sense, individual alertness and tactfulness about road culture, applica-

tion of first-aid; maintenance of road discipline and cleanliness

Lower Secondary Stage—Thorough instruction on rules for riding and driving; road signs and traffic regulations; collection of data, interpretation and problem-solving attitude for various practical problems faced by individuals on roads and statistics of road accidents; maintenance of strict road discipline and cleanliness; mini-project work in the form of work experience.

Process of Instruction

Instructional system must be really interesting, attractive and of educational value in order to draw attention of all the students. This is necessary because they are the ones who, in future, will be drivers, traffic engineers, road users, road construction personnel and others who are directly linked with road traffic. Hence the instructional system needs to be most practical in nature and performance-based so that the students may realise the value of road safety education.

Instructional Media

The instructional media may consist of the following:

- (i) Drill and practice, tutorial and simulators form of instruction.
- (ii) Multi-media approach, radio and television broadcasts, audio and video cassettes, radio vision, slides, films, etc.
- (iii) Textbooks, comics, etc.
- (iv) Preparation of road models by students as work experience and giving instructions.
- (v) Mock-ups, quiz contests, magnetic board, graphs, diagrams, posters, paintings, and charts.
- (vi) Practical training on very busy and congested roads, lonely or hilly roads, plain

or many-sided roads in the form of trips, field trips, excursions, or picnics.

In order to instruct the students, the teachers have to be provided with facilities to undergo some kind of short in-service training on the subject. A suitable course may be formulated for the teacher-trainees also.

Conclusion

With the increase in population and vehicular traffic of different kinds, India faces a tremendous difficult situation to maintain road safety at par with the developed countries of the world but things cannot be left to the hands of natural course. Road safety education for all is therefore a must to bring the situation under control. Now the question arises as to how the road safety programme be included in the curriculum for educating the school children. This is really difficult and problematic, because the curriculum in force is already voluminous for the school students. To tackle the situation, an integrated subject might be a suitable answer. The integrated subject may be entitled *Essentials of Behavioural Science* which will include all the modern emerging essential subject areas. The subject may be one paper only. The paper '*Essentials of Behavioural Science*' may include the following topics:

- (i) Road Safety Education
- (ii) Duties of a Citizen
- (iii) Disciplinary Education
- (iv) Population Education
- (v) Environment and Pollution Control Education
- (vi) General Educational Games for all
- (vii) Hygiene and Health Education
- (viii) Mini-project Work covering any one or more of the area(s) mentioned above.

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TO OUR CONTRIBUTORS

JIE invites articles/papers on the impact of educational research on classroom practices and policy decisions. Specific examples where this impact is apparent may be given.

GENERAL EDITOR

Computers at the Crossroads

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MICROCOMPUTERS are quite common in classrooms around the nation. No doubt, additional computers are needed and desired. However, some kind of access to computer terminals is available to most public school students. One interesting phenomenon is the lack of computer and software use in the classroom. Thus, the computers are idle during much of the school day, especially at the elementary school level.

Reasons for Not Using Available Computer Technology

In speaking with many classroom teachers, the writer notices several agreed-upon reasons for not utilizing the computer service.

First of all, teachers state that software is not available to achieve specific objectives emphasized in the class setting. The software then does not fit into what is presently being emphasized in the curriculum. The software content does not harmonize with the stated objectives. This is true even if a school system has much software in its library.

Secondly, teachers make little use of a computer in the classroom due to available software not

being on the understanding level of students. To be functional, the subject matter contained in the software needs to be meaningful to students. Meaning theory was first emphasized by William Brownell in the 1935 National Society for the Study of Education (NSSE) yearbook entitled *Educational Diagnosis*. NSSE at that time strongly advocated that students need to understand what is taught. Otherwise, nonsense learning accrues.

Thirdly, teachers realize that teaching students needs to be highly individualized. A writer of software cannot know what a student needs to learn next, within a highly contextual learning situation. A well-trained, professional teacher is in the best position to select what a specific student needs to learn next. A logical curriculum is then in evidence. Humanism, as a psychology of learning, advocates that the learner himself/herself should determine the next order of learning, since it is the student who must do the acquiring of understandings, skills, and attitudes sequentially.

Fourthly, a quality programme contains appropriate sequence. Within a software programme, students experience each succeeding activity based on the previous experience. Each new step of learning builds confidence within the

student. New content presented on the monitor is related to previous ideas presented. A high success rate in learning is then in evidence. To develop well in the affective dimension, a student should feel successful in learning. If software has not been tried out in pilot programmes, the steps of needed achievement may be too broad or wide in latitude. A learner may experience considerable failure due to the programme having gaps between steps which make sequential learning difficult. The student at the terminal needs to feel that the sequential content to be mastered is related. Previously acquired learnings provide readiness for mastery of new subject matter. Teachers may find it difficult to utilize selected software packages due to the poor sequence involved.

Fifthly, teachers find it difficult to manage a classroom of students in which each student may experience content using software and the computer. They may find it easier to manage a given set of students using other materials in teaching than the use of software and computers. With one computer in a classroom for twenty-five students, the teacher needs to become highly proficient in managing a given set of students. However, the problem of managing students remains with one computer terminal per room. Instead of one computer per room, a separate room could house ten to fifteen computers. Each day of the school year, students with teacher guidance might experience for one class period computer-assisted instruction. Students with two members on a team might then work at a terminal. The software utilized by the team must provide for sequential progress in learning.

Sixthly, software and computers must provide for unique ways of learning the subject matter and skills which other materials cannot provide. This truly represents a problem for advocates of computer use. How can software programmes provide unique ways of learning for students? Many additional materials are available for teachers to utilize as learning opportunities. There are video tapes, video discs, films, filmstrips, slides, cassette tapes, textbooks, workbooks, worksheets, and library books, among other items of instruction. Computer-assisted instruction needs to offer a

unique method of teaching which truly assists each student to achieve optimally. New subject matter must be presented on the monitor. The content is sequential from the learner's own unique perceptions. Or, lessons involving review using microcomputers need to be presented. The review presentations must assist learners to master worthwhile subject matter. Problem-solving experiences which emphasize reality also need to be in the offing. Finding out where students have specific problems in learning should be another function of computerized instruction. Learning opportunities must then be provided to help students overcome problematic situations in acquiring content. Play as a form of learning is also important. Thus, students need to utilize play methodology to achieve more optimally in using gaming procedures within the framework of computer-assisted instruction.

Evaluation of Software

Numerous journals in the field of professional education contain reviews of software evaluation. Selected software programmes have been evaluated quite negatively. Enumeration of software weaknesses will now be discussed.

A frequent complaint pertaining to software which has been tried out by students with teacher guidance is that too few opportunities exist for students to interact with the content presented on the monitor. The content presented on the monitor becomes a lecture. Situations such as these avoid relevant goals of software construction. Students should have ample opportunities to respond to questions/test items covering the content read on the monitor. A small amount of information then should be presented on the monitor, after which the involved student responds to a related question or test item. Students need to receive feedback pertaining to each response made.

A second criticism of software relates to the prolonged, elaborate feedback that a student receives after responding correctly to a question or test item. Ten firemen sliding down a pole, as shown on the monitor, after each correct response

given by a student is time-consuming and monotonous. Rather, the software programme should provide clear, concise reinforcement for the correct responses made. A brief "that's good" with its many variation phrases for each correct answer given by a student should be adequate in terms of rewards.

Thirdly, carelessness is in evidence when words are misspelled or erroneous information is presented on the monitor. Correct spelling and other mechanics of writing are only to be expected in quality software. Students perceive the content on the monitor as a model. Mistakes in the mechanics of writing as well as erroneous information presented on the monitor provide a negative model for students.

Fourthly, weaknesses pertaining to appropriate sequence of content in the software needs remedying. If the steps are too broad in sequence, students experience failure. Certainly, software must be tested in pilot studies prior to being put on the market. Classroom teachers should demand that proper order of content in software is a must. It is only to be expected that developers of software develop sequential materials for students.

Fifthly, microcomputers and software need to emphasize the concept of being computer friendly. Too frequently, the mechanics of operation become a stumbling block to students. The student needs to spend too much time in determining how to use a specific programme that little time is left over for acquiring important understandings (facts, concepts, and generalizations), skills (creative and critical thinking, as well as problem-solving), as well as attitudes (beliefs, values, and positive feelings).

Sixthly, excessively difficult terms appear on the monitor. Learners make little progress if the vocabulary load is too great or too complex in an ongoing presentation. Software needs to be appropriately edited so that students experience meaning and not frustration in learning.

Philosophy of Computer Use

Philosophy guides teachers in selecting objec-

tives, learning activities, and appraisal procedures in teaching-learning situations. Each school or school system needs to develop a philosophy of computer-assisted instruction.

Experimentalism, as a philosophy of education, emphasizes a problem-solving curriculum. Flexible, not rigid, steps of problem-solving need to be emphasized. These steps may well include

- (a) identifying and clarifying a problem
- (b) gathering information in answer to the problem.
- (c) developing a hypothesis
- (d) checking the hypothesis
- (e) revising the hypothesis if necessary.

The problems must be vital and relevant in society. The school curriculum must be integrated and not separated from society. With student involvement in problem selection, interest in learning should be in evidence. Interest then provides for effort in ongoing lessons and units. With problem-solving, the subject matter tends to lose its boundaries and borders. The fused, rather than the separated subjects curriculum, is in evidence. What is needed to solve problems and test hypotheses is utilized as the subject matter. Experimentalism, as a philosophy of education, has much to say to the classroom teacher in terms of how computers and software will be utilized. That use will be the solving of problems identified by the student with teacher guidance.

Idealism, as a separate philosophy of education, stresses in idea-centered curriculum. One can only receive ideas from the external world. The perceiver cannot know the real world as it truly is or exists. Since ideas then become salient in the curriculum, students need to learn much subject matter. The intellectual facet of a person's development must come first. Software must be selected by the teacher which assists students to attain vital ideas, such as facts, concepts, and generalizations. The broader ideas (concepts, and generalizations), in particular, are significant for learner acquisition. According to idealists, how should software for students be selected? The software content should aid in intellectual growth. Mind is real and needs to be cultivated in mental development activities. Carefully selected

software can aid students to attain well in the intellectual dimension.

Realism, as a third philosophy of education, can be emphasized well in the curriculum when using computers. Realism states that one can know the real world as it truly is and exists. One then can secure an objective duplicate of the real world. To attain the real world as it really is, measurably stated objectives for students to achieve need careful selection. To be a measurable objective, precision of the intended end needs to be in the offing. The objectives need arrangement in ascending order of complexity. Observable results are secured from learners if goals have or have not been attained, after instruction. Software using computers should contain only those stimuli which assist students to achieve precise objectives.

Realism has much to advocate in computer-assisted instruction in that measurably stated results are obtained from students if the precise objectives have or have not been achieved.

Existentialism, as a fourth philosophy, states that students need to develop the art of decision-making. Learners need to choose, from among alternatives, sequential tasks. The tasks chosen, hopefully, will be meaningful, interesting, and purposeful. Students then need to have a voice in determining which software programmes to pursue. Teacher-student planning is excellent to utilize as a method of teaching. Existentialists tend to emphasize that knowledge and choices in life are subjective and not objective.

As students grow increasingly toward adulthood, they will find that there are endless choices to make. Life in and of itself is absurd. Within the absurdity of situations, the individual needs to make continuous choices. Moral decisions should be an end result.

Existentialism, as a philosophy of education, also has much to emphasize in software and computer use. The message of existentialism tends to emphasize learners making sequential choices as to objectives, learning opportunities, and appraisal procedures. Value judgements need to be made in computer-assisted programmes of instruction.

The Psychology of Learning and Computer Use

Two psychologies of learning which will be discussed are behaviourism and humanism.

Behaviourism advocates the utilization of precise sequential objectives in teaching students. Software packages should assist students to attain the precise ends. Each objective is observable if students have or have not achieved it, as a result of computerized learning opportunities. Feedback from the computer reveals if a student is successful in achieving each objective. There is no guesswork if a learner has/has not achieved each precise objective. Linear or branching means of programming are utilized to determine if a student is/is not successful in achieving each objective. Computerized instruction has much to offer in terms of students attaining precise ends.

Humanism, as a second psychology of learning, emphasizes concepts such as student-teacher planning, learning centers or stations, students selecting from among alternatives as to objectives, learning opportunities, and appraisal procedures. A psychological curriculum is heavily in evidence with rather heavy student input into curriculum development. Whereas, a logical curriculum is stressed when a programmer writes, develops, and tests software for student interaction.

Computers at the Crossroads

Will computers and software survive in the school curriculum? Basically, computers are there in somewhat ample number. Software tends to be lacking in selected curriculum areas. It also lacks quality, relevance, and harmony with child growth and development characteristics. What needs to be done in developing quality software so that computers are heavily utilized in the school curriculum?

Haste has made for waste. Software, in many cases, has not been tested adequately in pilot studies. Errors in spelling and the mechanics of writing are too frequent. Poor models exist for students when seeing problems in spelling and other mechanics of writing on the monitor. Debugging is

of utmost importance when software is placed on the market for school consumption.

More attention will need to be placed on sequence of content in software programmes. Sequential learning for students is of utmost importance. Failure to learn can, in many cases, be attributed to improper order of content presented on the monitor. Writers of software must keep the concept of sequence continually in their minds when writing programmes for students in different curriculum areas.

Software must fit into the unit presently being taught in the curriculum. Too frequently, software is not available that relates directly to the lesson being taught presently. Content in software must be integrated into ongoing lessons and units. Separation of the subject matter in software with that being taught presently is not acceptable. Neither is it acceptable for software content to be well above or below the present achievement level of the student. If the subject matter in the software is too complex, failure in learning will be in evidence. If it is too easy, boredom will tend to set in on the part of the learner. Computerized instruction must meet the criteria of being directly related to the subject matter being presently taught in a lesson or unit, as well as be on the understanding level of the involved student.

Relevant content, not trivia, needs to be inherent in software presentations. If a student does not experience what is important and salient in content, time and effort is being wasted by the student. Certainly, content in software needs to be carefully chosen. It must be of value and have practical application in society.

Software use needs to emphasize the concept of being computer friendly. Programmes that are too complex for use should be discarded. For example, a programme may require the correct spelling of lengthy words into a computer. Otherwise, the commands typed will not be accepted by the computer. Thus, if an item on the monitor requires the student to respond correctly with the word 'interdependent' being spelled correctly, the learner's response may be incorrect due to not spelling that word correctly. The learner may know the correct answer but not have spelled the word correctly when typing com-

mands into the computer.

Students need to experience a variety of kind of programmes depending upon the needs of the student. Drill and practice, as one kind of programme, needs to be in evidence. Review of what has been learned previously is important. Retention of vital subject matter content is a must.

Tutorials, as a second kind of software, must stress new salient facts, concepts, and generalizations for learner acquisition. Unimportant ideas should not be emphasized in quality tutorials. Sequential subject matter must be in the offing to assist students to achieve well when tutorial software is utilized.

A third kind of software emphasizes diagnostic-remedial programmes. Diagnosis must pinpoint specific difficulties experienced by a learner. Remediation needs to guide the student to overcome the diagnosed weakness. Remediation must follow diagnosis in the software package.

Simulations should be based on reality and life-like situations. Problems for students to engage in decision-making is a must in simulation. True problem-solving should be in the offing. Ridiculous situations should be weeded out of any simulation programme. As in all software programmes, students need to make ample responses to problems and questions. After responding, the learner must receive appropriate feedback, based on each decision made in simulation. Several students may discuss the pros and cons of each decision made.

Games for students to learn the subject matter should be challenging. The games need to stress content that is being taught in ongoing units and lessons. Cooperative choices may be made by a committee when competing against another group. The individual or committee with the highest number of points is the winner of the game.

Software and computerized instruction must meet definite criteria when drill and practice, tutorial, diagnostic-remediation, simulations, as well as games are emphasized in the curriculum.

Conclusion

Will software and computer use survive in the curriculum? Presently, many computers stand

in classrooms underused and in some cases unused. This medium of instruction could go the way of other well-advertised technology of the past. However, computers are utilized in the business world and in society in general in a very comprehensive way. School and society must not be separated. Software, to be useful in the curriculum, must be upgraded in terms of quality. There are definite principles of learning which provide guidance in writing software programmes. Software content must be evaluated thoroughly prior to its being placed on the market

for purchasing by a school or school system

Diverse philosophies of education and psychologies of learning need emphasis in software development. Perhaps, a specific philosophy and psychology may be developed and become inherent in computer-assisted instruction, be it drill and practice, tutorial, diagnostic-remediation, simulation, or games.

Above all, computer-assisted instruction should provide interesting, meaningful, purposeful, and significant content when providing for individual differences among students.

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The Creative and his Mental Health

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CREATIVITY may be described as an ineffable and sui-generis phenomenon. It is said to be a prerogative of man, so is the person who creates. The creatively-gifted individual diverges much from the intellectually-gifted one, and also from rest of human population. He is known for his independence of thinking and non-conformity to group pressures, a sensitive temperament and introverted behaviour, and is also characterized by autonomy of will. Such characterization of the creative personality is well established on both empirical and theoretical grounds. Torrance, MacKinnon, Barron, Guilford, Maslow, Rogers, Stein, Cattell, Arieti, etc. have ascertained the presence of such factors in creative personality both empirically and theoretically. There is, however, another aspect of his personality which has remained controversial. Thinkers in the field have variously perceived and interpreted this facet of the life of the creative individual. The question, whether the creative individual is mentally healthy or emotionally deranged, still remains to be solved and decided unequivocally. Basing their arguments on historical and, sometimes, also on empirical evidence, different psychologists put divergent and, sometimes, even conflicting claims. Some of them tend to associate creativity with positive

mental health, yet there are others who claim a positive relationship of creativity with mental illness, and not with mental health. But before some empirical design can be prepared to test the said relationship empirically, an intensive scanning of research literature is most needed. It is only then that one can peep into the psychodynamics of this intricate process—the unique human phenomenon, and some definite hypotheses can be framed and tested accordingly.

The Italian psychiatrist C. Lombroso (Arieti, 1976) strongly believes that a positive relationship exists between genius and mental illness. In an article, 'Genius and Insanity' (Lombroso, 1891) it was shown that a large number of geniuses suffered from neurological diseases ranging from neurosis to full-fledged psychosis. Lombroso's list includes Julius Caesar, Mohammad, Petrarch, Moliere, Napoleon, Dostovsky, Newton, Rousseau, and Schopenhauer who had occasional attacks of insanity. Among great musicians, Mozart, Schumann, Beethoven, Donizetti, Hoffman, and Gluck suffered from frequent mental illness. Lombroso believed that genius may be an expression of 'degenerative psychosis' (Arieti 1976, pp 354-355).

Jacobson (1926), on the other hand, holds that

creative men may be of insane temperament, but this hinders their creativity. He further mentions that creative persons suffering from such mental sickness produce their best work in the healthiest period of their lives.

Lange Eichbaum (1932) stated that a large group of geniuses became psychotic but only when they had completed their great works. The list includes Baudelaire, Copernicus, Donizetti, Faraday, Kant, Newton, etc. But Eichbaum also admits that many creative geniuses did their work in the midst of their psychosis. Some of such creatives were Monet, Maupassant, and Rousseau. Their psychosis could not colour their work; and the two remained distinct. Holderline and Van Gogh, nevertheless, were exception to this; their psychosis affected the content and form of their creative work. Eichbaum also includes in this list a large group of geniuses who were on the borderline of mental illness, but did not suffer from full-fledged psychotic disorders. In this group he includes Beethoven, Byron, Heine, Michelangelo and Schopenhauer. They possessed eccentric personalities and were far from what we normally connote a mentally healthy person. Pickering (1974) more recently, in his book 'Creative Malady', describes creative malady of Darwin, F. Nightingale, Marry Baker Eddy, S. Freud, Marcel Proust and Elizabeth Browning. According to him, Darwin and Nightingale suffered from psychoneurosis; Nightingale, for sometime, was morphine addict. Eddy suffered from hysteria due to her unresolved conflicts between her natural personality and what she wanted to project to the world. Pickering, referring to John's biography of Freud, states that Freud suffered from anxiety hysteria. Marcel Proust suffered from asthma. Elizabeth Barrett was morphine addict (who later became Elizabeth Browning), and she remained so till her death.

Roth (1976) considers conflict as one of the two great motivating forces for original work, the other being the desire for self-expression immanent in us all. Arlow and Brenner (1964) are of the opinion that successful resolution of conflict may result in formation of permanent ego structures or functions which are stable in nature and whose mode of activity no longer reflects the impulsive nature

of the original drive component. Thus, they favour the presence of conflict as a drive for novel work.

Apart from evidence based on biographical studies in the context of creativity and mental illness, the psychoanalytic view also asserts that conflict and other neurotic tendencies lie at the root of originality and some other form of creative self-expression. Bellak (1958) holds that the quantity of 'ego regression' is displayed both by those who are creative and those who are mentally disturbed, although the former manage to synthesize and thus are able to increase their adaptive capacities.

May (1959), on the other hand, while criticizing the Freudian view of creativity, held just the opposite viewpoint. He pointed out that such a reducing of creative activity to neurotic process is not proper. He asserts that creativity is related to mental health and not to disease or neurosis.

Some of the contemporary investigators of May, including Maslow (1959, 1962), Rogers (1959) and Froman (1959) join hands with what May (1959) has claimed. They tend to prove that creativity can occur in well-adjusted individuals only. To Maslow, for example, "creative expression, in some form, is an endeavour to self-actualization. It is a process of realizing and completing oneself by an integration within, and between self and the world. It is through this process that self becomes unified, more open to experience, and more fully functioning" (Taylor, 1975).

Barron (Gowan et al., 1967) argues somewhat differently. According to him, the imbalance in creative personality is only apparent; the fact remains that they are healthier than the average. The cause of the apparent imbalance, according to Barron, is the gap that occurs between the creative and the social majority. He describes the creative individual as a person who is sensitive, possesses a high energy level and ability for complex synthesis.

Interestingly enough, Torrance (1964) too empirically found that the creative person is extremely sensitive and requires independence. In an earlier article, Torrance (1961, pp. 31-34) tries to give somewhat convincing reasons as to why a creative individual is apt to be involved in problems. He writes: Inescapably, the individual who thinks

of a new idea is in the very beginning a minority of one..... there are very few people who can tolerate being a minority of one, since creativity involves independence of mind, non-conformity to groups' pressures or breaking out of the mould, it is inevitable that highly creative children experience some unusual problems. Thus the highly creative child either must repress his creativity or learn to cope with tensions which arise from being a minority of one. Repression of creative needs may lead to actual personality break-down. Their expression frequently leads to loneliness, conflicts, and other problems of adjustment.

Existence of Subconscious, Unconscious Mental Mechanisms in Creativity

Brand Harry (1976) tries to demonstrate how creative expression and its manifestation occur concomitantly with certain persons having neurotic tendencies. He describes Franz Kafka as the most representative prose writer of the 20th century. His personal conflicts, especially with his parents, are revealed in his writings. Even in the midst of severe neurotic symptoms such as his irrational anxiety, paranoia, and hysteria, Kafka was able to write in a clear and firm style which had universal acceptance and meaning. According to Harry, such a finding proves the existence and role of unconscious and subconscious processes in creative thought expression. It is these processes that give a unique direction to one's manifestations of innate capacity. One may, therefore, hypothesize that in certain cases the existence of anxiety and conflict becomes an occasion to kindle what is hidden in the innermost recesses of the psyche.

But in Jane's (1977) study the above conclusion seems to be contradicted. According to Jane, who discusses the relationship between creativity and altered states of consciousness occurring in dreams and meditation, hypnosis, and biofeedback, severely conflicted individuals cannot cope with the altered states of consciousness. Such individuals are less creative than healthy persons.

Muller-Braunschweig (1975) in a research ar-

ticle discusses the occurrence of creative powers and psychopathology in the same personality. According to him, the creative ego must be flexible, dealing with id created unconscious fantasies on comparatively free way, but in psychopathology this ability is impaired. Nevertheless, creative functions may be formed which act to work out anxiety-laden fantasies in a world of symbols, thus, enabling the ego to deal freely with impulses. As a work of art develops, objectification of fantasies brings forth a new reality. Intensification of cathexis and simultaneous displacement of substitute objects is posited as a condition for later creative processes, particularly, artistic ones.

Perry (1973) in an article "Creative Element in Madness" states that the deepest experiences of the psychic life cannot be communicated in every day words but require a new language. The psychotic, immersed in his inner spaces, is lonely, because he cannot tell his experiences to those who are not living at the same level. Drawing a similarity between creativity and schizophrenia, the author says that both these psychic processes deal with integration, disintegration and reintegration. In both of these processes, "affect images" emerge rather than certain themes. These are followed by clashing and resolution; and finally a rebirth emerges.

Domino (1977) examined the existence of primary process thinking in dreams, and their relationship to creative achievement. He compared the night dreams as reported by 38 high school males who were considered creative (according to teachers' reports and RAT scores). Dreams reports of these creative subjects were rated by clinical psychologists as exhibiting greater primary process thinking than those of matched controls. Their dream protocols also included a significant greater proportion of symbolism, condensation, and unusual combinations but a smaller proportion of contradictions. In this experiment the presence of primary process thinking was found to be significantly related to creativity level.

Hammer (1975), in a research article entitled Artistic Creativity — Giftedness or Sickness, discusses the relationship between creativity, mental health or illness and emotional conflict. It is concluded that: (a) for each individual there is an

optimal level of tension and anxiety, that is necessary for personal growth and creativity, (b) that the ability to synthesize and to integrate is necessary for creative work, (c) that the capacity to be in touch with deep unconscious forces, without breaking down, is crucial to an artist.

Personality Studies of 'Known Groups of Creatives'

Kretschmer (1933) reported that the commonly held notion of associating mental sickness with creativity is not valid. He found out that scientists are not associated with any kind of such abnormality. To quote Kretschmer, scientists have shown "lively originality and vibrate with sensibility and inward tension.... Behind the cool stream of thought there lies a glowing passionate core.... that drives their thoughts. Scientific and inventive genius is.... under the sway of an overvalued idea. The success of such an idea depends upon the favourableness of circumstances and the intellectual power of the individual. The successful are inventors. ...the failures paranoids. In fact, Kretschmer seems to indirectly favour proneness towards abnormality of behaviour as a characteristic of the creative genius, which may become manifest under the sway of circumstances that lead to failure.

MacKinnon (1962), in his sample of master architects, finds them to enjoy sensuous experience, to have social poise and presence, to be genuinely dependable and responsible. They tend to be critical, skeptical and not easily impressed by and concerned with their own adequacy, as a person. On the basis of psychological tests it is shown that the creative groups have greater psychopathology than the representative members of the same profession. The average creative architect is less marked by deviant behaviour, but is still consistently and substantially higher on psychopathological dispositions, but strikingly higher on ego-strength than general population.

The male creative group demonstrates extremely high peak on the MF (Femininity) scale of the California psychological inventory (1957) and of

the masculinity-femininity scale of Strong's Vocational Interest Blank (Strong, 1959). The study reveals that the more creative a person is, the more he reveals an openness to his own feelings and emotions, has a sensitive intellect and understanding, self-awareness and wide-ranging interests, which in the American culture, are thought of as feminine (MacKinnon, 1962).

Personality Studies of Potentially Creative Individuals

As is evident from the studies mentioned earlier, there is not much consistency regarding the personality correlates of known groups of creatives in themselves. The difference seems to magnify when the personality correlates of the potentially creative persons are compared with those of 'known groups' of creatives. White (1968) brings this distinction to the limelight when he says that the personality correlates of creative behaviour as determined by known groups of creative individuals are, in most cases, distinctly opposed to the personality correlates of creative behaviour as identified by divergent thinking tests. For example, extroverts, as defined through Cattell's 16 Personality Factors, are higher on divergent thinking measures of fluency, flexibility and originality than introverts.

Kinnard White (1976) conducted another study to find out the relationship between anxiety, extroversion-introversion and divergent thinking. He tested hypotheses concerning the effects of anxiety level and its interaction with extroversion-introversion. The rationale for testing hypotheses concerning anxiety and divergent thinking derives from Spence (1956) who suggests that anxiety is a drive, and very strong drives or high levels of anxiety can prevent adaptive changes in behaviour.

The results show that regarding significant main effects the low anxiety group scored higher on the ideational fluency task than the higher anxiety group. And the high E-1 (Extroversion-Introversion) group scored higher on the ideational fluency tasks. Furthermore, differentially high performance on the originality tasks was made by the low anxiety

group (The High E-1 sub-group was the primary contributor to significant interaction effect) In this way White substantiates (though only partially) the findings of Spence (1964) Cattell and Scheier (1961), Eysenck and Eysenck (1962).

Kendil and Torrance (1978) conducted a study to verify as to what extent Finch's (1977) findings were true. Finch (1977) had reported that socially and emotionally mal-adjusted children have higher creative potential than socially and emotionally adjusted children. The investigator selected 50 children as subjects. These were drawn from grade one through grade five of special public school meant for emotionally disturbed and behaviour disordered children. Each child was tested individually on TTCT (Torrance Test of Creative Thinking) The scores on fluency, flexibility and originality were compared with national norms.

On fluency, 80 per cent of these children scored above average, and 24 per cent ranked in the upper two per cent on national norms (both significant at .01 level). On flexibility, 60 per cent were above average, and eight per cent were in the upper two per cent (not significant at .01 level but significant at .05 level). On originality, 88 per cent were above average, and 48 per cent were in the upper two per cent (both significant at .01 level). Thus, the group of socially and emotionally mal-adjusted children showed unusual strength on fluency and originality but not on flexibility.

Resume

A scanning of the above-mentioned divergent (yet convincing) arguments may lead one to the conclusion that the life of a creative individual is not a smooth sailing. He seems to be confronted by problems of various sorts, viz. social, emotional, or adjustment, etc. Nevertheless what marks him uniquely is that he is a highly motivated individual endeavouring towards self-actualization of what potentially he 'is.' Ensuing of anxiety in the life of such a person, therefore, seems natural. The same may be substantiated by the fact of his heightened sensitivity to environment both physi-

cal and social, and his easy access to primary processes (regression in the service of ego) Zukerman and Spielberger (1976, p. 123) quote Averill according to whom potentiality for anxiety is inherent in man's nature who lives in a largely symbolic universe of his own construction. Anxiety is not nearly a sign of pathology, it is a part of (creative) human potential. The fact that the lives of many of the great geniuses have been full of turmoil and turbulence, and of conflicts—particularly relating to cognitive ambiguities—does, at least, suggest that anxiety (or more correctly anxiety proneness) and creativity in an individual go together. The queerness and eccentricity of attitudes become part and parcel of the life style of such geniuses. The investigator, therefore, hypothesizes that potential for creativity and anxiety proneness occur concomitantly. But the question that still remains unanswered is: Do the two campus, the one associating creativity with positive mental health while the other depicting the life of great creative genius as full of conflicts and in some cases leading to psychopathology, contradict each other?

This investigator opines that the contradiction is in fact not real. The two groups view the problem from two different angles. There seems no doubt in the fact that a potentially high creative individual perceives incompleteness, void or, at least, cognitive gaps between parts of the same reality. He, therefore, directs his energies in bridging the gap through his unique interpretation of reality. This perceived gap may be hypothesized as the source of anxiety in such an individual. But when he is able to fill up the gap, he feels delighted. Thus, with every creative achievement he adds to his growth and development. Creativity, therefore, may be an endeavour on the part of an creative individual to alleviate anxiety which was occasioned by his perceptualized cognitive gap.

Such hypothesizing can, perhaps, be better understood in the light of what McReynolds (1976) holds as cause of anxiety. According to McReynolds, the sole cause of anxiety is cognitive backlog created as a result of unassimilation of "percepts" in the cognitive structures of the individual. Evidently, such unassimilation of "per-

epts" causes some confusion and turbulence in the mind of the potentially creative child which engenders anxiety in him. In his effort to assimilate the massimilated content (by creating unique relationships) he is both alleviating that particular instance of anxiety, and simultaneously stepping towards growth which Maslow would call 'self-actualization'. But again a potentially creative person would perceive such cognitive incongruencies, and hence feel anxious till such perceptual incongruencies are removed. So the moments of anxiety and the moments of delight occur simultaneously.

It may, however, be well understood that the intent of the investigator is not to prove any cause-effect relationship; neither he wants to say that occurrence of anxiety is conducive to creative growth. He simply wants to hypothesize that potentially creative person is anxiety prone (because he can see incongruencies and "gaps of knowledge" more quickly than others). If he is not given the facilitating climate for his self-expression, or if he fails to create such an environment, he may be overwhelmed by anxiety which ultimately may take a pathological form.

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Setting Assignments/Questions for Distance Education

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THE focal point of the entire education scenario is obviously the learner, the one variable whom the teacher needs not merely to understand thoroughly, but must also be in a position to accept, predict and direct his pupil's behaviour and the causes of his behaviour. This is no mean task especially in the case of the distance teacher. In this system, a teacher is not simply an educator/tutor, he is, or ideally should be a counsellor, a guide and above all a good psychologist—besides being susceptible to the needs, interests and ambitions of the distance learners. His sole aim is to promote change in the direction of growth because he has to shoulder the responsibility of transmitting the skills, knowledge and attitudes that are in concord with desirable behaviour.

Objectives of the Setting of Assignments and Questions for Distance Education Students

Barring the method of asking questions, it can safely be said that the aims and objectives of setting assignments and questions for the DE students are similar to that of the face-to-face teaching system. But as there is no possibility of immediate feedback from the distance learner,

which necessitates the application of specially prepared materials and the use of different media and methods, the setting of questions/assignments, therefore, needs to be paid special attention.

Assignments should be set so as to render students sufficient practice in problem-solving skills. Each assignment should be commented upon, marked (by giving different weightage to quality, accuracy, application and originality) and returned to the student by the examiner. Besides, a set of correct answers be provided (if possible).

The use of continual assignments plays a vital role in distance education. It may be regarded as a regular system of evaluation of students assessing their knowledge, intellectual abilities, skills, interest, initiative, industry, discipline, attitudes, aspirations, etc.—carried on throughout a course of study.

A point to be borne in mind is that a good assignment includes questions posited by the teachers directing the attention of the learners to the salient points of the reading material. The teacher must not only be fully cognizant with the ideas contained in the teaching material, but must also possess the ability to formulate questions that, as the learner attempts to answer, as he reads, will lead him on to discover the real import of the idea.

presented by the writer.

It is also believed that knowledge gained through the formulation of answers to questions is likely to be remembered longer than knowledge gained through study efforts directed at attempts to remember all ideas regardless of their relative importance. A few general questions, however, may not be sufficient to bring out all the ideas that should be learned. In addition to the so-called key questions, attention should be directed to questions dealing with more or less minute details that presented in proper sequence in relation to the main questions, help to further understanding and mastery. Even slow learners can follow ideas that are presented in proper sequence and with appropriate emphasis. Every learner should develop a critical attitude towards his own power to read, to think, to master and to re-present.

Language of the Assignments/Questions

Language plays a vital role in the setting of assignments/questions (both in formative and summative evaluation). As teaching involves communication, it is learnt that language poses a great deal of problem to the distance learners. Sometimes proper communication is not through because the message does not get across at all or reaches the other end only in garbled, distorted and unrecognizable version. It is a problem recognized both in the assignments/questions meant for them. It is often found that a distant student has not learnt what the teacher intended him to learn...the message has not got across or that the student 'learns' something which the teacher never intended him to learn. In this case a message is received but it is not the one which was sent out. This gap between 'teaching' and 'learning' develops mostly because teachers of the distance education system do not pay enough attention towards the 'language' of the whole system or because teachers expect the message not to get through easily and this intellectual gymnastics of the teacher mostly misled the students.

It is expected that vocabulary and syntax of both the study materials and questions must offer max-

imum opportunity for complete and accurate communication of ideas between the teacher and the students. It means not only should the words chosen be within the range of the students' vocabulary but also that the teachers' colloquialisms and clichés should be known and used meaningfully. In one word, the language of the question must approximate to the language of the student. As the student population is heterogeneous (belonging to different educational, social, economical and cultural background), special care ought to be taken to meet the needs of the students. The solution of the problem lies in, using 'simple' language which communicates successfully to the maximum number of students. However, specialized vocabulary or technical words/terms may be used in professional or vocational courses like management, law, etc.

Thus unequivocal and straightforward language is the secret of not only a good DE material, but also of a good assignment/question meant for DE students.

Information Level

A question must be worded so that it lies within the students' present level of information in a meaningful way. It is probably better if no unrealistic assumption is made about the expertise of the student or the amount of information he possesses. This is a very touchy point, indeed. It is a fact that when the question-setter with the authority of his role, asks the students a question, there is an implication that the student should be in possession of an adequate correct answer and that if he fails to answer he is somehow discredited.

In these circumstances not only will the authority have lost the answer to a question, but he will also pay a heavy price in terms of decreased motivation which may result in a 'drop-out'. Another possibility, of course, is that the student, feeling obligated to show his knowledge, will pretend to competence which he does not possess.

The importance of asking questions appropriate to the students' level of information and not productive of students' embarrassment does

not necessarily limit us to asking questions to which every student knows the answer. It does, however, mean that caution in wording questions must be used when we anticipate that a considerable proportion of students will not be in possession of the answer. This problem is sometimes called 'export error', i.e. the error of ascribing to the student a degree of expertness in a particular field which he does not actually possess.

Single Idea

Every question should be limited to a single idea or to a single reference. The most acceptable formulation of a question in this area would depend, to some extent, on the specificity of the unit objectives. It is always advisable to ask two individual questions or one global question rather than make a synthesis of the two

Question Sequence

Arrangement of the questions in a specific unit requires a great deal of attention of the question-setter. Questions must be arranged so as to make the most sense to the student—that is, the sequence of idea in a question paper (meant for home assignment) should follow the logic of the student. A well-designed assignment sheet facilitates the easy progress of the student from item to item and often leads him to anticipate the next question because it seems to him the logical topic to discuss.

The sequence of questions may also be determined by what is called the "Funnel approach". This refers to a procedure of asking the more general or the most unrestricted questions first and following it with successively more restricted questions. Thus, in this sequence of questions the frame of reference is gradually narrowed down by asking more specific questions. The purpose of the funnel approach is to prevent early questions from conditioning those which come later.

The following series of questions illustrate the funnel approach:

1. How do you think this country is getting along in its relations with other countries?
2. How do you think we are doing in our relations with Pakistan?
3. Do you think we ought to be dealing with Pakistan differently than we are now?
4. (If Yes) What should we be doing differently?
5. Some people say we should get together with Pakistan and others think we are too tough. As it is how do you feel about it?

Question/Motivation

The first two or three questions of any questions paper should be made to perform a dual function. Firstly, they ought to be included so as to obtain information on specific objectives laid down by the question-setter. Secondly, they should also help to educate and motivate the student.

It is also found in many instances that the student may not know the kind of response expected of him—that is whether a 'one-word answer' will suffice or whether he is being asked to discuss the subject in detail. He may be simply confused about the authorities' demand. Hence instructions to the questions may also be taken care of.

One of the main purposes of the question-setter should, therefore, be to motivate the student in the pursuit of his studies. It is more so in the case of assignments. As distance teachers, we are concerned with two phases of interest. First, the interest of the learner somehow must be captured and second, he must be helped to make learning a habitual activity.

Thus, even if we cannot control 'extrinsic motivation' (determined largely by external circumstances, e.g. students' socio-cultural background which influences his attitude towards learning) we can easily take care of intrinsic motivation (related to the nature of the learning task).

Conclusion

It is, however, universally true that a learner's success does not depend on any particular factor

It is the pattern, the complex of correlates with which we must be concerned. But it is also noticed that some factors are relatively more important than others or have a higher weight value in the correlate pattern than the rest. Each factor, however, taken as a single unit (curriculum, method of teaching, medium of instruction and testing) contributes something to achievement as a whole.

There are numerous other factors of an emotional nature that may hinder success in learning for DE students. Difficulties in adjusting to a new education system (as there is no physical presence of the teacher) makes it impossible for the learner to expend the energies needed for learning. Besides this, though it is presumed that DE students

are 'self-motivated' yet poor parent-child relationships, sibling rivalry, unfair comparisons with a neighbourhood prodigy, lack of encouragement from the home and negative attitudes of parents towards learning in a general way, may lead to failure.

Finally, a teacher in the DE system must be an environmentalist. Even though he cannot add to the learner's basic capacity, he can do much to encourage the child to develop his potentialities. It is believed that a DE learner conventionally has a much greater mental capacity than he is willing to use. As teachers, therefore, our task is to challenge the existing capacity of the pupil rather than to try to add increments to this native endowment.

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Teaching Competence: Effect of Advance Organizer and Concept Attainment Model

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THERE is widespread dissatisfaction about the quality of teaching and its outcomes. Therefore, a number of innovative practices are being evolved. The latest among the approaches to teaching is the focus on models of teaching. In our country researches have not been conducted on the various models of teaching. Very recently attempts have been initiated in this direction (Chaudhari *et al.*, 1981; 1986; Chaudhari and Malik, 1985; Chaudhari and Panda, 1986; Passi and Gangrade, 1986; Vaidya & Bajpai, 1986).

In the studies cited above facilitative effect of Advance Organizer Model (ACM) and Concept Attainment Model (CAM) has been found. In these studies suggestions have been made to undertake further studies to arrive at precise conclusions.

In the present study an attempt has been made to study the effect of ACM and CAM on the teaching competency of student-teachers.

The major objective of the study was to compare the effectiveness of CAM, ACM and the Traditional Method (TM).

The problem was analysed in the light of the major objective and further translated into the following null hypotheses:

1. There will be no significant difference between the mean gain scores of the student-teachers teaching through three different methods.
2. There will be no significant difference between the mean gain scores of the student-teachers teaching through CAM and ACM.
3. There will be no significant difference between the mean gain scores of the student-teachers teaching through CAM and TM.
4. There will be no significant difference between the mean gain scores of the student-teachers teaching through ACM and TM.

Design of Study

The present study was an experimental investigation. The experiment was conducted on the

student-teachers of B.Ed. (Department of Education, University of Indore). Thirty students were selected on voluntary basis and assigned to three groups on the basis of intelligence. Analysis of

instructions accordingly.

Any difference observed at the end of the experiment in terms of performance on the criterion test among the control and experimental groups

TABLE 1

Summary of ANOVA for Intelligence

Source of Variance	SS	df	Ms	F	Level of Significance
Between the Groups	0.2	2	0	0	NS*
Within the Groups	270.3	27	10.011		

NS Not significant

variance was used to test whether the three groups were similar. Table 1 presents a summary of ANOVA

Each Group (N=10) was randomly assigned to a particular treatment. Table 2 presents a summary

was attributed to the different treatments administered. The duration of the course was one week, with additional time for preliminary organization and orientation.

TABLE 2

Summary of Group Formation

Group	Pre-test Phase	Treatment Phase	Post-test Phase
Experimental Group I (N=10)	Scores on criterion test given before the treatment	Teaching through CAM	Scores on criterion test given after the treatment
Experimental Group II (N=10)	Scores on criterion test given before the treatment	Teaching through ACM	Scores on criterion test given after the treatment
Control Group (N=10)	Scores on criterion test given before the treatment	Teaching through TM	Scores on criterion test given after the treatment

of group formation and different treatments given.

The content from Hindi and Economics subjects prescribed for Grade IX was selected as teaching unit. The pre-test post-test parallel group design was used for the experiment. The GTC (General Teaching Competency) test (Passi and M. Lalita, 1975) was administered to the Control and Experimental groups before and after the experiment to generate pre-test and post-test scores.

Experimental Group I was exposed with CAM and the student-teachers were provided instructions accordingly. Experimental Group II was exposed with ACM and they were provided

Techniques Used for Statistical Analysis

Analysis of variance was used to see whether the mean gains scores obtained on the criterion test by the different groups differed significantly. The significance was determined by using ANOVA. 'F' value was found significant. Then Scheffe's 'S' test was employed again to find out the significance of 'F' ratio obtained by the analysis of variance.

The mean of pre-test post-test and the gain scores obtained by the student-teachers of the Control and Experimental groups are given in Table 3.

TABLE 3
Mean and Mean Gain Scores of Groups

Group	Mean Pre-test Scores	Mean Post-test Scores	Mean Gain Scores
Experimental Group I CAM	38.70	90.30	51.60
Experimental Group II ACM	36.7	71.6	34.9
Control Group TM	38.1	59.5	22.4

The data obtained from the experiment were subjected to one-way analysis of variance and hypothesis No.1 was tested. The results are presented in Table 4.

cy among the three groups teaching through different modes of teaching was indicative of real difference. Since 'F' value was found to be significant, its follow-up was warranted. To follow up the 'F'

TABLE 4
Summary of ANOVA for Mean Gain Scores of Control and Experimental Groups on Criterion Test

Source of Variance	SS	df	Ms	F	Level of Significance
Between the Groups	4292.6	2	2146.3	8.0720*	.01
Within the Groups	7179.1	27	265.89259		

*Significant at .01 level

It could be observed from Table 4 that the obtained value of 'F' was 8.072. The 'F' value required for significance at .01 level, for 2 and 27 degrees of freedom was 5.49, thus the obtained value 8.072 was found to be greater than the tabulated value. It was, therefore, concluded that the obtained value was significant at .01 level. Hence, the null hypothesis was rejected. Consequently, it could be inferred that the difference in teaching competen-

results and in order to make a positive comparison, Scheffe's 'S' test (Smith, 1970) was used. The results are presented in Table 5.

In order to find out whether the mean differences shown in the table were significant, the values of Scheffe's 'S' for .01 and .05 levels of significance were calculated. The mean differences were compared with these values. The values of 'S' for significance at .01 and .05 levels were found to be 3.31

TABLE 5
Results of Scheffe's Test Based on Mean Gain Scores of Control and Experimental Groups on Criterion Test

Groups	Mean	TM III 22.4	ACM II 34.9	CAM I 51.6
CAM I	51.6	4.005*	2.70**	
ACM II	34.9	1.74***		
TM III	22.4			

*Significant at .01 level

**Significant at .05 level

***Not significant

and 2.58, respectively. When the observed mean difference values were compared with these values, two out of three comparisons were found to be significant. One was found to be significant at .01 level, whereas the other at .05 level. It was observed that the performance of the student-teachers teaching through CAM was significantly higher than that of the student-teachers teaching through ACM or TM. The mean difference between CAM and TM was found to be significant at .01 level, whereas the mean difference between CAM and ACM was found significant at .05 level. Hence, the mean difference was the highest in the case of student-teachers following CAM. Consequently, hypotheses No. 1, 2 and 3 were not found tenable and hence rejected.

The student-teachers teaching through TM

did not secure significantly higher mean gain scores than those who were following ACM. Consequently, hypothesis No. 4 could not be rejected.

It could be inferred from the results that CAM produced significantly better effects than either ACM or TM. However, no significant difference was found in the competency of student-teachers teaching through ACM and TM. The findings of this study, therefore, suggest that the concept attainment model could be used for improving the teaching competence of the student-teachers. However, the constraints of the study do not permit wide generalization. In order to arrive at dependable and precise conclusions, similar studies be conducted on a larger sample with greater rigour.

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Improving Instruction Through Self-generated Feedback

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IT is generally agreed that the perfect teacher does not exist, but all of the teacher community can refine existing teaching skills, discard ineffective ones and develop new skills to bring out desirable and effective learning in students. Some teachers are excellent in explaining and classroom management but average or low in leading group discussion or questioning. None of the teacher community will once be absolutely perfect, few will even be excellent in all aspects of teaching, but all can become better teachers than they presently are. The continuous process of improving the instructional skills is the essence of professional teaching.

The classroom instruction phase offers the teacher experiences to develop his skills in (i) instructing groups, (ii) implementing learning principles to solve instructional problems, and (iii) managing group experiences. Successful teaching brings about effective learning. Learning is not a function of extrinsic stimuli and reinforcements in certain temporal relationships as implied by theoretical models. It is a function of the intrinsic stimulus-response organization of behaving individuals. Teachers should be willing to engage in self-evaluation to improve their teaching if acceptable and useful methods/devices are available. If a

teacher is to improve his teaching behaviour, he must be willing to critically examine his classroom behaviour and that of his students and be willing to try new ways of teaching when present ones are not working. After identifying a basically satisfying style, successful teachers continue to experiment with new behaviours and they continually try to find out new ways to relate students. Using the results of own actions by a teacher to modify his instructional behaviour for optimal learning of students is known as the cybernetic approach to teaching which means self-regulation of activity. Here the knowledge of learning should be based on the analysis of sensory-feedback organization of behaviour in relation to both extrinsic and intrinsic variables. Feedback is used in the teaching system to continually refine and redirect teacher behaviour in the direction of optimal effectiveness.

Feedback: Its Nature and Importance in the Teaching-learning Process

The concept of feedback is borrowed from the communication theory and it occupies a position of pre-eminence in cybernetics. It essentially

means rechanneling a part of the communication output back again into the input channel to monitor or modulate the communication process itself. In general, the term feedback is used to describe a kind of reciprocal interaction between two or more events, in which an activity generates a secondary action which, in turn, redirects the primary action. The feedback control system incorporates three primary functions (Smith and Smith, 1966):

1. It generates movement of the system towards a target or in a defined path.
2. It compares the effects of this action with the time path and detects errors.
3. It utilizes error signals to redirect the system

There are two views regarding the nature of feedback. Some theorists compare feedback to a reward and explain its functioning in terms of the reinforcement theory, while other theorists accept feedback as correctional information instead of reinforcement. Deterline (1964), Fry (1963) and Skinner (1961) have accepted feedback as reinforcement, and that immediate feedback is a major asset of the media. Brackbill, Braves and Starr (1962), Brackbill and Kappy (1962), Brackbill, Wanger and Wilson (1964) and Sturgis and Crawford (1964) support the idea of feedback as reinforcement but they have found delayed, rather than immediate, feedback more effective in facilitating learning. According to the reinforcement theory, immediate feedback facilitates the learning speed or acquisition while delayed feedback makes learning resistant to extinction. Kulhavy and Anderson (1972) argued that feedback functions as correctional information.

Franklin thought an instruction and a class as parts of a feedback system. The teacher in the classroom gets feedback from students' action and provides feedback to them. Emphasizing the importance of feedback in the teaching-learning discourse, Skilling (1969) writes:

"If the teacher learns by teaching to do a better job, he is adapting. And that's the way you have to learn to teach, because nobody has good teaching built into him. A violinist has to practice and hear the result and improve. A

teacher has to teach and get feedback from his class and improve. He has to be an adaptive element in his educational feedback system, because he is not surely not born with good teaching designed into his structure".

In a classroom situation not only the students but also the teacher learns. The teacher creates environment or conditions to facilitate pupils' learning. On the basis of the levels of pupils' learning or reaction the teacher learns to exhibit the behaviours which are desirable to promote pupils' learning. Thus feedback in the classroom is the most important signal to modulate or regulate the teacher's behaviour. According to Skilling (1969):

"Let this be a lesson to you, Philip. When you start teaching, your class will be learning. But you will be learning too. You'll be learning how to teach, and how you'll be adapting to the feedback you get. You'll adapt fast, because one thing we know about adaptive systems is that they improve very rapidly at first. So when you start teaching a class, Philip, remember that, if you want to be part of a really high-class educational feedback system, it's up to you to make yourself a good adaptive device".

If a teacher tries one method of teaching and that way does not give very good results, then he tries another method, and the results get better and he keeps on trying and changing his way of teaching. This is called the adaptive feedback system (Skilling, 1969).

Teaching is difficult, challenging and exciting work, but it takes time to develop and refine teaching skills. All teachers, even veteran teachers, have classroom problems from time to time, and that an appropriate strategy is not to hide mistakes, but to seek help and to solve the problems.

Sources of Feedback

The following sources can be used by teachers to get feedback about their classroom behaviour:

1. Certain information can be collected from students but young children are not capable of providing complex feedback. Secondary students can provide useful

feedback Taplin (1969) used cubes with different colour sides. Students could indicate their responses to questions by displaying an appropriate colour to the teacher.

2. Fellow teachers/peer student-teachers and teacher-educators can observe and code behaviours of the teachers. Here the observer should be skilled in the observation of the teaching behaviours.
3. Teachers can develop a conceptual system for labelling their own behaviour.
4. Video equipment is also used by teachers to see themselves in action. Reviewing the literature on vide-playback in Teacher Education, Fuller and Manning (1973) say there is little empirical evidence that seeing one's own teaching performance on television improves teaching effectiveness.
5. There are mechanical methods of obtaining feedback on learning. The Microbiology Department of the University of Ghent has equipped a classroom with an electrical answer system for students, not only to establish communication with a large number of students, but to make students active in the classroom. This is known as a "feedback classroom". The possible objectives of the feedback classroom is to (i) provide feedback to the teacher for immediate modification of presentation, (ii) provide feedback to the students, (iii) increase attentiveness of the students, and (iv) increase rapport between the teacher and the students

Cybernetics and Self-generated Feedback

The cybernetic psychologists conceptualize the learner as a system that seeks continually to correct himself by obtaining feedback and processing it. There is an analogy between humans and machines. The control focus is the apparent similarity between the feedback control mechanisms of electromechanical systems and

human systems. The cybernetic psychologists interpret the human being as a control system that generates a course of action and then redirects or corrects the action by means of feedback. All human behaviour involves a perceptual pattern of motion which includes both covert behaviour such as thinking, symbolic behaviour and overt behaviour. In any given situation, individuals modify that behaviour according to the feedback they receive from the environment. They organize their movements and their response pattern in relation to this feedback. Thus their own sensory motor capabilities form the basis of their feedback system. The essence of cybernetic psychology is the principle of sense-oriented feedback that is intrinsic to the individuals and is the basis for self-corrective choices.

Instruction in cybernetic terms is designed to create an environment for the learner in which this full feedback takes place. The teacher as a system can continually correct himself by obtaining feedback and processing it. The feedback provides data but not the answer or action. Learning in cybernetic terms is sensorially experiencing the environmental consequences of one's behaviour and engaging in self-corrective behaviour. A speaker is guided as he talks by the signals he receives from his audience. Raised eyebrow, smiles, frowns, questions, grunts of approval or disapproval, all are for him to clarify, repeat, emphasize, or de-emphasize his words. Good speakers are alert to the signals exhibited by listeners and uses them as guidelines to help him convey his message according to his intended purpose. Actual communication occurs only when events in one place or at one time are closely related to events in another place or at another time. In a most common and familiar case, what a speaker says is one set of events, and what his listeners understand is the other set; if these are closely related, we say that communication is occurring.

The teacher obtains little immediate verbal feedback on his effectiveness from students in the classroom teaching-learning situation, but non-verbal feedback is possible. In an interesting French study, Guyot (1970) has shown that there is a relationship between the positions occupied by

students in a lecture theatre and their feelings towards their teacher and their fellow-students.

Observations of variations in students' gaze and posture can also produce useful feedback on the teacher's performance. Unfortunately, few teachers regard students' reactions to their teaching. A teacher who fails to study his students' reactions can hardly be regarded as doing his job properly.

To improve instruction, it is a first need that the teacher should be continuously reading the reactions of students in the classroom. Much inappropriate teaching occurs because the teachers are unaware of their behaviours and students' reactions (Pambookian, 1976). In an interview with the teachers, Good and Brophy (1974) found that many aspects of different teacher behaviour toward high and low achievers were unknown to the teachers. When the teachers were presented specific information about their behaviour that both intrigued and bothered them, they wanted to change their behaviour. Subsequent observation illustrated that the teachers change their behaviour, and these were the signs that students were beginning to change their behaviour as a result of changed teacher behaviour.

The teachers must decide what is good practice by observing the effects of their behaviour on students. There is no concrete formula for specifying good teaching because research examining teacher behaviour has not yielded a definite set of teaching behaviours that are always clearly related to student growth (Dunkin and Biddle, 1974; Rosenshine and Frust, 1971; Rosenshine, 1976).

Cybernetic Approach in Teacher Education

The cybernetic approach in teacher education means to train the student-teachers to get relevant feedback in the classroom and behaving accordingly. In the existing teacher training programme, teacher-educators or peer student-teachers observe the student-teachers' behaviours and give feedback. In the schools when a student-teacher comes in practicing stage, nobody is there to provide feedback. The practicing teacher is

responsible here to see his and students' behaviour and utilize his observation for the modification of his own instructional behaviours, so that maximum pupils' learning can take place. Thus it is desirable to train student-teachers not to change their behaviours according to provided feedback only but to get feedback in their classes by observing the students' action/behaviour also. Here the teacher is responsible to generate feedback and improve instruction through self-generated feedback. This approach can be implemented in teacher education through the following steps:

- Defining instructional objectives in behavioural way.
- Possible course of action of teachers in the classroom situations to realize the determined objectives.
- Methods/ways to get pupils' reactions regarding the attainment of instructional objectives.
- To find out the gap between the level of predetermined instructional objectives and learning outcome of students.
- Repeating the same methods/devices of teaching or employing the new ones (it depends on the learning outcomes of students).
- Evaluating the efficacy of new methods/devices on the basis of the learning outcomes of students.

Conclusion

It is suggested here that teachers and student-teachers should look at their own classroom behaviour and plan ways to make classrooms more meaningful and exciting. For this, stress should be placed on improvement-oriented self-evaluation which is a difficult task. Although in a teacher education programme modification of teacher behaviour according to the given feedback is in practice, but getting feedback by self-evaluation is not given due attention. It is a challenging step for teacher-educators and student-teachers which is not impossible. However, such analysis, if tackled one step at a time and linked to prescriptive

strategies for improving behaviour, will lead to self-growth and satisfaction that accompanies becoming more effective.

The major difficulty regarding this idea is the awareness of behaviours of teachers what they have exhibited during the teaching-learning discourse in the classroom. The first and greatest

factor that makes it difficult for the teachers to assess classroom behaviour is that so much happens so rapidly that they cannot be aware of everything they do in the classroom. This problem can be solved, in part, through training. The teachers can become aware of their classroom behaviour with practice.

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Academic Performance of Children : Nigerian Parental Influence

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RECENTLY, children's educational performance seems to have dropped below expectation. The most pressing problem about education in Nigeria especially in Rivers State today is the poor WASC result. Questions have been asked as to who really is responsible for the poor educational performance. Some people say the government is responsible. Some say the children have refused to learn, others say the teachers and yet others say the parents are to blame. The researcher is of the view that each party mentioned above has a part to play, especially the parents because charity is said to begin at home. Since the parents are the character-builders of their children, it is essential that the parents' role in their children's educational performance be known particularly now when education has become a very important social index in Nigeria.

Poor educational performance is a problem both to the individual who may suffer from a sense of failure and to the society which loses the full contribution of the unestimated number of its members (Iti, 1979). It then follows that anything which will be done to reduce the incidence of poor academic performance will be advantageous to the individuals and to the society.

Previous studies have revealed that the parents

influence their children's educational performance directly or indirectly (Barker-Lunn, 1971; Banks and Finlayson, 1973; Fox, 1968; Benjamin, 1969; Burt, 1955; Floud, Halsey and Martin, 1956 and 1957; Grift and Pidgeon, 1959; Fraser, 1959; Pidgeon and Grift, 1959; Peaker, 1967 and Douglas et al 1968).

The results of these studies have revealed that the parents' occupation, family size, parental attitude towards a child's study, having private lessons, family discipline, etc. influence children's educational performance. A child's development depends very much on the people around him. The people influence him in so many ways such as by the examples and commands which they give to the child. The closest people around any child are the parents and there is little doubt that they should influence his educational performance. Such parental influence on a child's performance has been confirmed by Burt (1955) who revealed that there is relationship between a child's achievement and his home background. Floud, Halsey and Martin (1956) also showed that children from manual homes on the average have poorer attainment than children from non-manual homes.

Since the parents influence their children's educational performance, the question now is:

What should be best done in a country like Nigeria where most parents are not educated? The present study sought to know the extent to which the parents influence their children's educational performance and what is to be done to assist children whose parents are not knowledgeable on how to assist them achieve better educationally. Particular reference is made to a representative sample of parents in Port Harcourt City of Rivers State of Nigeria

Materials and Methods

The study was limited to parents in Port Harcourt City of Rivers State. The survey study method was used for the purpose of this study

A questionnaire on the parts parents play during their children's secondary education period was constructed and distributed personally to the parents living within Port Harcourt city. Five hundred parents comprising 300 literate and 200 illiterate parents were randomly selected. The 300 literate parents were given the questionnaire to complete while the researcher interviewed and

completed the questionnaire for the other 200 illiterate ones. Some illiterate parents who were not willing to respond to the questionnaire were left while those who agreed to respond were allowed to do so until the 200 questionnaires were completed. There were a number of non-responses from the literate parents. As a result, only 193 out of 300 questionnaires were completed and returned making a total of 393 responses out of 500. The researcher requested the sampled parents to show her the last results of two of their children from which she copied the average scores of each of the children. Any child who scored 70 per cent and above was put in excellent group, 50-69 per cent as average and below 50 per cent as poor. The researcher feels that the result is a good representative because the parents will always bring the results of their best children. The parents came from all walks of life and since they came from various parts of Nigeria, they further increased the chances of good representation of the Nigerian parents. A simple percentage was used to find out if there is relationship between parental influence and children's academic performance

TABLE 1
Distribution to Show Parental Occupation and Children's Academic Performance

Performance Level	Types of Occupations											
	Civil Servants		Business including Traders		Farmers		Students		Others		Total %	
	No	%	No	%	No	%	No	%	No	%	No	%
Excellent	39	9.9	24	6.1	12	3.05	12	3.05	6	1.53		
Average	141	35.9	48	12.21	15	3.8	15	3.8	9	2.36		
Poor	3	0.76	24	6.10	24	6.20	6	1.53	15	3.81		
Total	183	46.56	96	24.41	51	12.95	33	8.38	30	7.7	393	100

+Excellent performance refers—to those children who scored 70 per cent and above average in the class examination
 ++ Average—score from 50-69 average
 +++ Poor—score from 49 and below

Analysis

Table 1 shows that 9.9 per cent of the civil servants' children performed excellently in schools compared with 6.1 per cent of children of business parents, 3.05 per cent of the farmers' children, 3.1 per cent of the students' children and 1.53 per cent of the children from other occupations.

From the data in Table I the civil servants' children came first in the excellent academic performance, business parents' children came second, students' children third, farmers' children fourth and others fifth.

The Table also shows that 35.9 per cent of the civil servants' children performed averagely in schools while 12.21, 3.8, 3.8 and 2.36 per cent of the children of business parents, farmers, students and others, respectively, performed averagely. It is further revealed from the Table that the poorest performance came from the farmers' children (6.20 per cent), followed by the children of business parents (6.10 per cent), other parents (3.81 per cent) and students (1.53 per cent) while the children of civil servants had only 0.76 per cent poor performance.

Table 2 shows that out of the 393 parents sampled only 87 checked their children's work always, 147 claimed that they checked occasionally while 159 stated that they never checked. Among these, 11.4 per cent of the children of parents who checked their children's work always scored excellent in their school work while only 7.6 per cent and 6.9 per cent of the children whose parents checked their work occasionally and never, respectively, scored excellent. On the other hand, the highest poor score the children whose parents never checked their school work is 25.21 per cent, followed by those whose parents checked occasionally (21.4 per cent) while none of the children of parents who checked their children's work really scored poorly.

The same table reveals that 75 out of the 393 parents said that they enquired about their children's school progress while 168 claimed they occasionally enquired and 150 stated that they did not enquire at all. Among the children of these parents, 7.6 per cent scored excellent for those

parents who enquired always, 13.7 per cent for those who enquired occasionally and 6.1 per cent for those who never enquired. In the same way, the table indicates that the highest poor score came from the children of parents who never enquired about their children's progress (16.8 per cent), followed by those who enquired occasionally (16.1 per cent), while none of the children of the parents who enquired always scored poorly. Also, 4.6 per cent of the children of parents who always gave assistance to their children in doing their class assignments scored excellent in their school work.

While 11.5 per cent and 11.5 per cent of the children whose parents occasionally and never gave assistance scored excellent. This result seems abnormal, but in research of this type, this situation is not infrequent.

Subsequently, the highest poor performance came from the children whose parents never assisted (22.9 per cent), followed by those who assisted occasionally (27.5 per cent). While none of the children of parents who assisted their children always performed poorly.

Finally, the table illustrates that 63 out of the 393 parents taught their children at home or sent them for private lessons always, 198 parents did this occasionally while 132 never did so. Among the children of these parents, 10.7 per cent of those who taught or gave private lessons always scored excellent, 10.6 per cent of those who did this occasionally scored excellent, while only 2.3 per cent of the children of those who never scored excellent.

The highest poor score came from the children of parents who never taught or gave private lessons to their children at home (17.6 per cent). This is followed by the children of parents who taught or gave private lessons occasionally (16.8 per cent), while none of the children of those who did the above function always scored poorly.

The analysis of the results reveals that parental attitudes towards children such as checking children's work after school, enquiring about their progress at school from teachers, assisting in solving the assignments given to children, providing for extra classes or private classes, etc. influence children's academic performance.

At any rate, it is noted that although most

TABLE 2
 Relationship to School Achievement, Between Parental Attitudes and Children's Academic Performance

	Always						Occasionally						Never					
	Excellent			Average			Poor			Excellent			Average			Poor		
	No.	%	No.	%	No.	%	No.	%	Total	No.	%	No.	%	No.	%	No.	%	Total
Checking children	45	11.4	42	10.7	—	—	—	—	147	30	7.6	33	8.4	27	6.9	33	8.4	159
Enquire about children's school progress	30	7.6	45	11.5	—	—	—	—	168	54	13.7	51	12.9	63	16.1	60	15.3	150
Assistance in class assignments	18	4.6	24	6.2	—	—	—	—	77	45	11.5	24	6.2	45	11.5	39	9.9	174
Teaching children at home or have private lessons	42	10.7	21	5.4	—	—	—	—	198	42	10.6	90	22.9	66	16.8	54	13.7	132
Total	87									42		90		9		69		100

parents never performed any of the above-tested parental attitudes, some of their children still scored excellent in their school work. This is not surprising because most children have high intelligent quotient (IQ) and are therefore very intelligent. They probably could have done better if their parents had assisted them by performing any or all the above functions

Discussion

The most striking finding of this study is that only parents who always checked their children's work, discussed with their children's class teachers, assisted children in doing their assignments, provided children with private classes, etc. do not have children who performed poorly at school, while those who do the above only occasionally and those who never do so have, in all, the four tested parental attitudes (see Table 2).

In comparison, it can be noted that the parents who do not do any of the above functions have more children who performed poorly at school than those who performed excellently, 25.2/6.9 per cent for those who never checked their children's works, 16.8/6.2 per cent for those who enquired about their children's progress, 22.9/11.5 per cent for those who assisted in doing their children's assignments and 17.6/2.3 per cent for those who provided private classes.

The result seems to suggest that the attitudes of the parents towards their children's educational pursuits influence the achievement at school.

Floud et al (1956) stated that the parents' attitudes towards the education of their sons were more an important variable than income and housing for better achievement. The Plowden Committee (1967) identified parental attitudes as more important than material circumstances of the home or variations in school for educational success.

Anthony (1981) noticed that

"the middle class parents take more interest in their children's progress at school than the manual working class parents do and they become relatively more interested as their

children grow older One other very striking difference is that many middle class fathers visit the schools to discuss their children's progress with teachers whereas the manual working class fathers seldom do so"

One indication of his report is that middle class children perform better than manual working class ones confirming that the attitudes of parents towards children's academic work affect their academic achievement. Parental attitudes (interest) towards children's school progress influence their achievement because it does not only encourage the children to work hard but also inculcates discipline into them. The children develop reading habits and give greater attention to studies rather than become over-indulgent at play and performance of household chores and therefore resulting in disinterestedness in studies. The finding of this study seems to be in agreement with Griffiths' (1959) who found parental encouragement to be a determining factor in the students' progress in the grammar school. Also, Pidgeon (1959) had concluded after his research that the most important factor bearing on the educational progress of students was the attitude of the child's parents.

In the same view, Fox (1968) also found significant and positive correlations between achievement and motivation, achievement and social economic background

Conclusion

It has become clear from the results of the analysis that parents influence their children's academic achievement directly or indirectly. For instance, a parent's occupation and the attitudes displayed go a long way in determining the children's achievements.

Since this is so, the researcher wishes to make the following recommendations.

1. Parents particularly fathers should endeavour (because most mothers are not educated) to spend more time with their children, checking their daily school work, regularly enquiring from the

- teachers about their children's progress, assisting in their assignments and teaching and providing them with extra classes.
- 2 Parents should encourage their children to study after school hours and watch educative programmes on television. This may keep them away from excessive play that tends to distract their attention from reading
- 3 Illiterate parents should advise their children to read at home and to ask their teachers what they do not understand.

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Vocationalisation of Higher Secondary Education in Karnataka: Need for a Data Base System and Evaluation

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VOCATIONALISATION of higher secondary education is the most crucial component of reform under the 10+2 pattern of education. The characteristic feature of higher secondary education is diversification, wherein besides the academic courses, students are provided opportunities to choose subjects having wider scope. The courses are designed to meet the existing and emerging manpower needs of the country. The courses are expected to provide a meaningful terminal point at the end of 12 year schooling. A necessary feature of higher secondary education would, therefore, be the provision of a large number of vocational streams, which would generally be terminal.

The National Education Policy (NEP) seeks to give a vocational bias to the entire educational system. The Ministry of Human Resource Development (HRD) proposes to start schemes to make vocational education available to ten per cent of all secondary students by 1990, which is expected to be extended to 25 per cent of the students by 1995. About Rs 400 crore would be spent by the

Ministry of HRD alone, on creating facilities for vocational education.

The Ministry of HRD has constituted a Joint Council of Vocational Education (JCVE), comprising of union and state government officials, as a coordinating authority. Out of the 15,000 schools in India, 1900 have been provided with facilities for vocational education (1000 in Tamil Nadu alone).

The NCERT (National Council of Educational Research and Training) has been the implementing agency in regard to vocationalisation of education after the acceptance of the report of the Kothari Commission (1968). On the basis of the recommendations of the Central Advisory Board of Education (1973-74), the then Ministry of Education and Social Welfare entrusted the task of preparing curricula for vocational courses to the NCERT. The NCERT circulated a draft document on vocationalisation.

The NCERT published in 1976 a pioneering document entitled "Higher Secondary Education and its Vocationalisation" which covered a gamut of issues and areas pertaining to the programme of

vocationalisation, curriculum design, vocation identification, teacher orientation, to mention a few. The National Review Committee (Adisheshaiah Committee), after examining the NCERT document, evolved a plan of action for the introduction of vocational education at the higher secondary stage (1978). The Central Board of Secondary Education and the Directorates of Education in the states decided to enforce the vocational stream.

87, as many as 165 institutions are offering the vocational stream with about 261 courses¹. This is the only state which has set up a separate Directorate of Vocational Education. The Directorate is responsible for admission and examination of vocational courses.

Since the vocational education programme has been implemented for the last ten years, it is important to look at the evaluation of these courses with reference to the objectives of vocationalisa-

TABLE I

Year of Commencement and Number of Institutions

State/Union Territory	Year of Commencement	No. of Institutions (1984)
Andhra Pradesh	1979	107
Assam	1983	16
Gujarat	1977	66
Haryana	1983	22
Karnataka	1977	109
Maharashtra	1978	250
Pondicherry	1978	7
Tamil Nadu	1973	940
West Bengal	1976	34
Delhi	1977	15
Andaman, Nicobar Islands	1981	10
Lakshadweep	1983	21

Source: Arun K. Mishra, Role of NIE in Vocationalisation of Education (1975-84), National Seminar on Vocationalisation of Education (1984).

West Bengal was the first state to implement the vocationalisation programme at the higher secondary stage (1976). The States of Gujarat, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Pondicherry and the Union Territory of Delhi introduced the vocational stream during 1977-79, while Haryana, Assam, Lakshadweep introduced it in 1983 and Andaman and Nicobar Islands in 1981 (Table 1).

Vocational education was introduced in Karnataka during 1977-78. The scheme covered 13 junior colleges of the districts of Bangalore, South Kanara and Dharwar, with 21 courses. As of 1986-

87, as many as 165 institutions are offering the vocational stream with about 261 courses¹. This is the only state which has set up a separate Directorate of Vocational Education. The Directorate is responsible for admission and examination of vocational courses. Since the vocational education programme has been implemented for the last ten years, it is important to look at the evaluation of these courses with reference to the objectives of vocationalisa-
 tion. One such attempt was made by the National Institute of Education. The unit conducted two on-the-spot studies of vocational education in Karnataka, the first being conducted in March 1978, and the second in 1979 which were conducted in 13 junior colleges which were introducing the vocational stream. The objective of the study was to assess the merits, difficulties, progress, challenges, attitudes and reactions of the students and of the society, employment prospects and whether any improvement is needed in the scheme etc. The study team, in addition to visiting the institutions contacted

1 Annual Report of Govt. of Karnataka, Dept. of Education, 1986-87.

Heads of the institutions, vocational teachers and students to ascertain their reactions as well as opinions. The reports were sent to the concerned Directorate as feedback

A study of the students who had completed the vocational courses in Karnataka revealed that during the period 1979-82, the vocational programme enabled 44.4 per cent of the students of vocational courses to be gainfully employed. Many preferred wage-employment to self-employment. Only 13.2 per cent opted for self-employment (A. Mishra, 1984). Such an analysis reveals that one of the objectives of vocationalisation to act as a terminal point of education, has not been achieved.

A careful analysis of the factors responsible for the failure of the programme, however, does not promise a brighter future to the policy of vocational education. Even the most recent National Policy on Education does not seem to have considered factors like availability of, and demand for, different kinds of skills in the existing labour market, the amount of money involved in providing different kinds of vocational education likely to be in demand, the problem of rural unemployment, the extent of existing infrastructure, alternative ways of providing vocational education, raising funds, enacting and enforcing legislation to implement the new vocational and employment policy.

State budgets generally have no or very little provision for vocational education. In Karnataka, only Rs 1.63 crore was allocated for vocational education during 1984, while the total allocation for education during that year was Rs 429 crore (S.C. Chaudhry, *The Hindu*, Feb. 16, 1988). This allocation has been drastically reduced to Rs 77.86 lakh for the year 1986-87.²

An attempt was made in the present study to evaluate the efficacy of the vocational courses at the higher secondary stage in Karnataka. The Directorate of Vocational Education was contacted to obtain details regarding the number of institutions offering vocational courses, enrollment, drop-outs, percentage of successful candidates and

employment status. As per the information provided by the Directorate, the status as of 1986-87 is as follows:

Number of institutions offering the vocational stream	165
Enrollment	7014
Number passed	3154
Employed	2475
Private	1459
Government	75
Self-employed	941
Status not known	2217

The Directorate has recorded this information course-wise also. But such general information was found to be of very little use, as the placement position of those employed was not available with the Directorate. As the Directorate stated that the information was obtained from the institutions offering the vocational stream, a questionnaire eliciting information on courses offered, enrollment, drop-outs, pass-outs and employment placement with official addresses as well as certain questions regarding their opinion on vocational education was mailed to all the institutions offering vocational education at the higher secondary stage.

While awaiting the responses, visits were made to such institutions in Bangalore to obtain first-hand information. Invariably, the institutions visited could only provide information on the courses offered, enrollment and successful candidates and not about the employment status as very few students call on the institutions after completing the course.

While the questionnaires were mailed to 57 institutions, less than ten institutions responded providing figures of the enrollment and successfully completed students. None of these institutions were able to specify the number gainfully employed, as they had no system of following up passed-out candidates. Even for those who informed the institutions as to the organisations they were employed at, did not have the official address. As a result, every effort made to get across some

2 Ibid Govt. of Karnataka report.

candidates who successfully completed the course proved futile.

While evaluation of the scope of vocational education is possible only with the details of employment status, such vague responses as the total number employed, and indicating general organisations such as Department of Sericulture or Cooperation will not serve any purpose for identifying the employed people with vocational education.

It is surprising and disappointing to note that though the vocational stream was introduced in the state a decade ago, no reliable data-base has been established by the Directorate of Vocational Education which is supposed to be the only one of its kind in the country. As a result, the very purpose of creating such a Directorate does not seem to have been achieved. One of the limitations of even the minimum available data is lack of internal consistency. To illustrate, data on employment status provided by the Directorate do not match with the institutional information on employment, despite the fact that the institutions are the origins of such information.

Need for a Data Base System

Lacuna in terms of reliability and validity of data is a major handicap in any evaluation study and follow-up programmes. To develop a data-base system, the Directorate of Vocational Education should —

- (a) Instruct the institutions to maintain an annual record of employment placement of all successful candidates and ensure that these reports are received by the Directorate regularly,
- (b) Constitute Employment Cells at district, regional and state levels whose major functions would be to register all the successful candidates, develop contacts with various organisations (and inform them from time to time about the candidates registered with them) and announce the available employment opportunities to all those registered with them. These cells

are to be directed to send Annual Reports of the number registered and placement position by organisations to the Directorate,

- (c) Impart special training programmes to teachers after selection and provide orientation programmes as and when necessary;
- (d) Change the syllabus to include Project Work in XII standard wherein the students have to work in any organisation for five to six weeks and prepare a report. This would enable the officials to assess the ability of the students and thus make interaction between students and organisations possible and fruitful,
- (e) Conduct annual surveys of institutions to assess the scope or otherwise of the vocational courses. In the process of these surveys, such courses which are found to have little or no scope could be discontinued and courses that are expected to have greater scope could be included in the vocational stream

The ideas of appropriate technology, labour-intensive employment-generating cooperatives and small-scale enterprises may be given concrete shape in proposing activities for a group of districts or a region, thus coupling education with productive activity. A district vocational committee would be most useful in deciding upon the vocations which require facilities, content of vocational courses and the manner of facilitating training in these vocations by cooperative participation of various organisations.

The time-honoured and most universal aim of education is that of preparing appropriate individuals to participate in, and contribute satisfactorily to all kinds of inter-personal and institutional relations. The proper preparation and nurture of people for these vocations involves a good-quality general education blended with considerable specific training.

An attempt was made at obtaining information through recruiting agencies like sericulture, cooperative, etc. It has been stated by these recruiting agencies that no additional weightage or

preference was given to those having plus-two qualifications. These recruiting agencies conduct 'induction training' for their employees or selected personnel which also does not necessarily require plus-two qualifications. This implies that the course pursued for two years at the higher secondary level is neither recognised by these agencies as equivalent to the training programme conducted by them, nor is considered as the basic qualification for recruitment and training in any capacity by the concerned agencies.

Thus, the very purpose of implementing the vocational stream would be futile if this trend continues. So, what is required is (i) reorientation of the curriculum to suit the requirements of recruiting agencies; (ii) involvement of resource personnel practising certain vocations in the two year training programme who are residing at places of physical proximity to the institutions; (iii) involvement of recruiting agencies in the two-year programme. These agencies should be involved in the process of curriculum design as well as in imparting training to the candidates. Such involvement by the recruiting agencies would eventually result in relevant training whereby absorption (to certain extent) of the trained candidates could be made possible.

An evaluation scheme of the vocational education is a must for the achievement of their aims. This evaluation should be at the institutional, district, regional and state levels conducted at regular intervals of one or two years and should consider the scope of employment, by pursuing the vocational courses. Such an evaluation scheme should preferably be entrusted to an external institution for unbiased outcomes.

The explosion of technical and vocational education in terms of students' demands and num-

ber of institutions, together with changes in the configuration of funding patterns, changes in the ability of the institutions to recruit high calibre staff, and changes in the role of institutions related to industrial and rural development has profound implications for the institutions and the way they are managed.

These changes for institutional management call for a review of the process of management development in such institutions and identification of those modes of activity which are most likely to support and facilitate the institutional management.

The four elements in the process of management development are policy formation, needs, actions and evaluation. The policy formation process is the one to be determined by individual institutions. The second phase is of identification of needs of management development. When needs have been identified, a choice of action to meet these needs is to be taken. And, the final phase is the evaluation of performance. The policy to be formulated will depend on the evaluation results, followed by needs, action, and evaluation. Thus, this has to be a cyclical process.

Hence, the vocational education system, in order to be meaningful, has to exist in an integrated system consisting of plus-two institutions, employing agencies, self-employed and plus-three institutions which is, in any way, an extension of the plus-two system. The need for a plus-two institution to relate itself continuously with its subsystems in the areas of curriculum design, student-intake, teacher training and placement could make vocational education achieve the objectives for which it exists and claims its status in the map of educational reforms in developing India.

Why Formative Evaluation?

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TILL recent past, evaluation has been entirely summative in nature. Summative evaluation takes place at the end of a course or semester, with the purpose of grading and certification. When summative evaluation is made more frequently every few weeks or at the end of a chapter or unit of instruction, this is known as intermediate summative evaluation. Intermediate summative evaluation is concerned with more direct and less generalizable outcomes, whereas long-term summative evaluation is concerned with the extent to which a student has realised the entire range of outcomes contained in a course. In summative evaluation the judgement is made after learning has taken place and it is presumed that all those who pass the examination have achieved that defined level of competence. The scheme of continuous comprehensive evaluation practised and advocated today in India is a form of intermediate summative evaluation and Board/School annual examinations are a form of long-term summative evaluation.

However, if evaluation is to aid both the teaching and the learning process, it must take place while the process of teaching and learning is still fluid and susceptible to modification. Formative evaluation intervenes during the formation stage, that is, when the process of teaching and learning is going on and

not after it is completed. It serves two important purposes of evaluation. Firstly, it points to the areas where corrective and remedial measures are needed. Secondly, it evaluates the process of learning. Formative evaluation thus provides feedback for both guiding teaching and learning and is an integral part of the teaching-learning process.

Defining Objectives of Formative Evaluation

Defining objectives of learning in operational terms has been widely accepted as is evident from Ralph Tyler's study 'Eight Year Study of Secondary Education (1942)' on curriculum construction and Bloom's taxonomy of educational objectives (1964). Tyler considered that the primary function of evaluation is to determine the extent to which students have or have not changed in relation to the set of desired behaviours. The emphasis in his approach was mainly summative, that is, how well the objectives had been obtained at the end of a course. Investigators like Gagne, Glaser, Stenhouse and Mager were interested to know why a set of desired objectives has or has not been achieved, that is, why an instructional programme worked or failed to work. They, there-

fore, evaluated each step of the instructional programme in relation to the desired set of objectives. Such an approach would help to improve the instructional package in the development phase rather than pondering over its failure after the programme is completed. It is also difficult to make radical changes in a completed programme. Emphasis in this approach is primarily on formative evaluation, that is, the formation stage.

Gagne (1963) analysed a set of capabilities into pre-requisite tasks which also are the building blocks of instruction. This technique, known as task analysis, is illustrated in Table 1 where Gagne has analysed an objective in mathematics into simpler components.

Classification of Objectives

The objectives of learning have been classified by Bloom (1963) into three domains, namely Cognitive Domain, Affective Domain and Psychomotor Domain. Cognitive behaviour objectives refer to remembering previously learned knowledge and being able to apply it to solve problems, affective objectives refer to interests, attitudes and values, and psychomotor objectives refer to muscular and manipulative skills. For the purpose of teaching and evaluation, the three domains, i.e. cognitive, affective and psychomotor are taken together as a comprehensive 'whole'. Leopold E. Klapfer (1976) has developed the

TABLE I
Task Analysis of an Objective in Mathematics
Adding Integers

Stating and using the definition of the sum of two integers, if at least one addend is a negative integer		Stating and using the definition of addition of two positive integers	
Stating and using the definition of addition of an integer and its additive inverse			
Using the whole number 0 as the additive identity	Supplying other numerals for whole numbers, using the associative property.	Supplying other numerals for whole numbers, using the commutative property.	Identifying numerals for whole numbers, employing the closure property
Performing addition and subtraction of whole numbers		Using parenthesis to group names for the same whole numbers	

In task analysis, the competence/skill desired at the end of a unit of instruction is described and then analysed into component tasks or behaviour which must be sequentially built up to arrive at the terminal performance. Thus task analysis takes the "macro performance and breaks it down into micro behaviour components, which are building blocks of instruction. Formative evaluation determines how well the students are assimilating these various intermediate components".

Thus, in formative evaluation, the terminal behaviour or competency is described first which is then analysed to micro tasks or behaviours. These, when sequentially arranged, form the building blocks of instruction.

structural details of Bloom's three domains of taxonomy—cognitive, affective and psychomotor, for science education. He has displayed the range of instructional objectives encompassed by different science programmes.

Leopold E. Klapfer's classification of objectives to make evaluation comprehensive, is as follows:

1. *Scientific Products*
Knowledge
Comprehension
Application
2. *Processes of Scientific Enquiry*
Observing and Measuring
Seeing Problems and seeking ways to solve them

- Interpreting data and formulating generalizations
- Testing and revising a theoretical model
- 3. *Manual Skills*
 - Skills in using common laboratory equipment
 - Performance of common laboratory techniques
- 4. *Attitudes and Interests*
 - Acceptance of scientific enquiry as a way of thought
 - Attitude towards social and moral implications of science
 - Interest in reading scientific literature
 - A specification grid where objectives are represented along with horizontal dimension, and content areas along the vertical dimension, shows which of these objectives can be achieved through which content areas.

Analysis of Learning Units

The learning unit can be a single lesson or learning session or the content that makes a meaningful whole. The learning units in formative and summative evaluation may or may not differ in the amount of content covered but differ in the purpose of evaluation. If evaluation is performed to determine how well a student has assimilated the components of a unit, so that decision can be made on how instruction should best proceed, then it is formative in nature. However if the purpose of evaluation is simply grading or certification or assigning marks at the end of a unit, covering the same content area, then it is summative in nature. In formative evaluation, the unit is developed hierarchically from simple facts to complex concepts and principles. In this hierarchy, facts are placed at the simplest level and information is collected on the basis of observations.

Next is a concept which is an idea generalized from particular and relevant experiences. Examples are electric current, acidity, cell, volatile. Then comes principles which are generalizations involving several related concepts. For example,

'Metals expand when heated'. This statement has three concepts: metals, heat and expand. A theory is a broader set of related scientific principles.

It indicates what details have been explained, defined and illustrated for each concept/principle in the textbook. These concepts are then arranged in the ascending order of simple to complex. Strategies of developing concepts involve identification, grouping, labelling, relating, summarizing, evaluating inferring and generalizing. The strategies of attaining a concept are observing, listening, comparing, selecting, stating and defining.

Tools of Evaluation

In the scheme of formative evaluation, every step of instructional programme has to be evaluated. Tools have been suggested to evaluate the process of collecting information, i.e. facts by observation and experimentation. Evaluation of intermediate steps in attaining and developing concepts and finally the skill of solving problems by applying appropriate principles has been suggested.

Since the goals of science education include such objectives as the spirit of inquiry, appreciation, moral commitment to conscientious citizenship along with the mastery of subject matter, these must also be evaluated in this scheme of formative evaluation. Formative evaluation aims at informing the students whether he has or has not mastered a given task and if he has not, indicate what steps should be taken to attain the desired competence. The teacher is, therefore, expected to point out the weak spots and to suggest possible solutions to overcome these weaknesses. Taking this formative view of evaluation, the teacher may indicate his evaluation in terms of 'remarks' or 'comments' and 'grades'. No rigid marking scheme has been suggested. Assigning of grades or classification of any kind is, however, not useful as reinforcement in formative evaluation. If a student receives C or D grade on two or three subsequent occasions, then he might develop a feeling that his achievement will remain C or D. But actually this is the process of learning and his achievement at the end of the process may be much higher.

The tools of evaluation illustrated in this scheme of formative evaluation include questions, student's record (observations), and teacher's observation (rating scale/checklist). The questions given in the scheme to evaluate each task/behaviour may be used in the form of class tests (written/oral/open book) or as home assignments (open book). For problem-solving questions, the students may be allowed to consult books and also for questions where collection of data or information from various sources is needed, relevant literature may be seen. Oral questions may be used where the students are demonstrating to relate cause and effect or to explain the happenings in an experiment. Most of the objective-type questions can be used as class tests (written, closed book). Field activities such as experimenting with plants, preparing working models, etc. may be taken up as group or individual projects depending on the nature of activity. However, these details have been left to the teacher and he can modify and even develop his own tools/schemes depending on the instructional package, availability of time and other extraneous factors.

Uses of Formative Evaluation

The purpose of formative evaluation is primarily to provide feedback and guidance to the teachers and the students. It informs a student where and what kind of corrective and remedial measures are needed. It also tells a teacher what kind of modification/reform is needed in his instructional package.

Feedback to Students

Formative evaluation helps the students in pacing their learning and also in remedying the particular gaps in their learning of a specific unit. The learning also becomes scheduled avoiding overwhelming amount to be learnt before final summative evaluation. In formative evaluation, the entire learning sequence is broken down into smaller steps and each step of the sequential learning programme is evaluated. When the subject matter is sequentially arranged, a student is

required to master pre-requisite concepts before learning principles or solving problems based on these concepts. Thus a student can know up to what level of facts, rules, concepts, principles, etc. he has reached and how much he has to learn in order to reach the desired goal. Also, mastery of the pre-requisite units makes learning of later units easier.

Formative evaluation provides useful feedback to the students by locating their difficulties. If a student knows which items he got right and which he got wrong on a formative test, he will have information about which ideas he still needs to learn or review.

This information can be made even more useful to the students, if an analysis of the causes of his difficulties can be provided. Such an analysis may also include necessary steps/suggestions to overcome these difficulties. Some evidence is available (Airason, 1968) to show that the lower items in a series have a necessary (but not sufficient) relation to the higher items in the series, that is, if a student makes an error on a lower item, it is unlikely that he will be able (except by chance or guessing) to answer a related higher item correctly. It also suggests that errors on the higher items (problem-solving) are in part the result of errors on the lower items (concepts, rules) of the series.

Errors/difficulties detected on formative tests can be corrected by suitable remedial measures. The teachers can provide special remedial materials such as clearer or simpler explanations, concrete illustrations, alternative simple instructional materials, etc. to help the students overcome a particular difficulty. A set of cards can be developed, each card containing a formative test problem, followed by a discussion as to why certain answers are wrong and why a particular answer is correct and what can be the best answer. Other remedial measures include tutorial assistance and special group cooperation.

Feedback to Teachers

An analysis of the errors made by the students can be used to identify the facts, concepts, prin-

ciples, etc. with which the students are having difficulty. If the majority of students (say more than 60 per cent) have not mastered a particular concept, then this may be regarded as inefficiency of the instructional material/instructional process. The teacher can attempt to reteach this particular concept using alternative instructional material and other techniques. The errors made by less than the majority of a class are the errors to be corrected by individual students. To remedy individual difficulties, the students may seek the teacher's help of co-operation of more able students. Formative

evaluation can thus be used to modify instructions.

Formative evaluation material may also be used for quality control purposes. If the course is similar in content and objectives, the teacher may compare the performance of one year to another.

All the students can achieve the desired objectives of learning if the scheme of formative evaluation is appropriately used. When the students are continuously evaluated and guided through the formative evaluation scheme, there is no reason for their failure in the final summative evaluation.

Women Resource Development in the Himalayas

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WOMEN form the very life blood of the socio-economic structure of the Himalayan region. The dominance of women work force in the field of hill agriculture and other developmental activities has always remained a fundamental feature. A woman in the hills has ever been laden by the double burden of (a) bearing and caring children as well as (b) working out in the fields and walking long distances in search of drinking water, fuel and fodder.

Manpower in the hills of Uttar Pradesh con-

stitutes 50.18 per cent males and 49.82 per cent females (Census 1981). Women here are numerically almost equal to men; to every 1000 men there are 996 women which is an improved situation from that of the national scene where only 935 women come as against per 1000 men. The hundred year time gap between the census of 1881 and 1981 shows a slight improvement in the population of women in the hills, except for Uttarkashi district. The fact is evident from Table 1.

TABLE I

Proportion of Women in the Total Population of the Himalayan Region in Uttar Pradesh

Districts	Year	
	1881	1981
Almora	53.8	52.4
Chamoli	50.6	51.0
Dehradun	41.8	44.9
Garhwal	50.6	53.1
Nainital	44.3	45.8
Pithoragarh	48.8	51.4
Tehri	49.8	53.1
Uttarkashi	49.8	46.9

Source. Column 1, Census of India 1921, United Province of Agra and Oudh, Vol. XIV, Part 2, The Govt. Press, Allahabad, 1923. Column 2, Census of India, 1981, Series 1, India, Paper 1 of 1982, Final Population Totals, 1983, pp. 203-206.

Women in the hills are always over-worked and over-burdened. Her chores begin right from dawn and cease late in the night. She cannot afford leisure enough to pay a bit of attention to herself. Traditionally, women always collect firewood. The scarcity of wood fuel because of the ruthless exploitation of forests has forced women folk to walk farther and farther to keep the hearth fire burning. Also because of the scarcity of drinking water they have to walk far to fetch water. All this she has to do on top of her immediate and agricultural duties, thus adding to her day many hours of non-productive activity which could usually be spent on other matters.

The village scene from 'the hearth' to 'the field' is dominated by women who cook and clean, sew and wash, plant and weed, care for the sick and old and bring up the young—thus a sixteen-hour day is not uncommon here.

Women, being the main work force, can be described as the hub of the rural socio-economic life. Males seldom lend a helping hand to them, rather, they usually add to their misery by always making demands or giving directions. Tradition-bound as the society is, women generally do not have their say in most of the matters though all rural life revolves round them. Women in the urban areas of the hills present a different picture. They are not as much burdened as their counterparts are in villages. The

urban women have access to higher education and other courses. However, they are rarely allowed to make free decisions—traditional male chauvinism still dominates. Man in the hills acts as a 'directive force' whereas woman works as a 'carrier force' only. Women actually do not realise their potential. It is because of lack of awareness and lack of education in them.

The picture of female literacy in the hills is rather grim. More than two-thirds of rural women are illiterate and this keeps them tradition-bound, superstitious and averse to change. They are found to be hesitant in welcoming and adopting modern technological innovations. Their mode of living and thinking shows little variation from that practised in yester years. Thanks to the efforts of the 'Chipko' activists and voluntary social service institutions like the Dasoli Gram Swarajya Sangh led by the Chipko leader Chandi Prasad Bhatt in Chamoli district, the Silyara Ashram led by Sunder Lal Bahuguna, another Chipko leader, the Bhuvaneshwari Mahila Ashram founded by Swami Manmathan, both in district Tehri, Uttar Pradesh, the Mahila Mangal Dals in different blocks and villages, etc that an awakening is dawning in the rural life and women are coming to realise their potential.

The human capital in the hills constitutes mostly of women whose dominance is visible in agricul-

TABLE 2

Female Cultivators in Proportion to Total Cultivators

District	1951	1961	1971	1981
Almora	51.7	60.3	49.9	51.1
Chamoli	54.0	59.8	60.9	60.1
Dehradun	45.2	29.2	17.9	22.2
Garhwal	54.0	65.5	63.1	61.5
Nainital	45.6	39.9	14.0	16.9
Pithoragarh	51.7	60.0	50.9	52.1
Tehri	53.3	61.6	58.3	58.4
Uttarkashi	53.3	53.9	52.1	51.7

Source: For Column 1 - Census of India, Vol. 2 - A, General Population Tables, Supdt. of Printing, Govt. of India, 1952. For Column 2 - Census of India, 1961, Vol. XIV, U.P. Part 2B (1) Economic Tables, The Manager of Publications, Delhi, 1965. For Column 3 - Census of India, 1971, Series 21, U.P. Part 2 (1) Economic Tables, The Manager of Publications, Delhi, 1973. For Column 4 - Census of India, 1981, Series 21, U.P. Paper 1 of 1981, Supplement Provisional Totals, Director of Census Operations in U.P., Lucknow, 1982.

ture and cultivation. The proportion of female cultivators to total cultivators and their ratio in work participation clearly establishes their dominance in the fields as is projected by the data in Tables 2 and 3.

are in economically active age groups. This higher women participation in the working age-groups reflects the migratory nature of male working force. The terrace-like fields do provide subsistence but for a short period of the year, hence the

TABLE 3

Work Participation Ratio in Cultivation

Age-groups (in years)	Year					
	1951		1961		1971	
	Male	Female	Male	Female	Male	Female
1-15	41.8	58.5	38.3	61.7	35.3	64.7
15-35	31.9	68.1	41.3	58.2	26.9	73.1
35-60	34.2	65.8	43.7	56.3	37.3	62.7
60 and above	51.6	48.4	62.3	37.7	67.4	32.6

Source: The same as for Table 2.

The sudden fall in the percentage of women cultivators in Dehradun and Nainital districts from 1951 can be attributed to different factors, primarily spread of education among women and more participation of males in the tarai bhabar areas of these districts where mostly males go to the fields as men do in the plains.

The demographic movement in Table 3 depicts decreasing proportion of male working force in the total population where, on the other hand, female participation is always on the increase. Here a peculiar factor comes to the fore that the female participation ratio shows a negative trend in the hills whereas the male work participation ratio is on the increase due to the migration of able-bodied male population in search of employment.

The exodus of manpower places a considerable burden on the women folk left behind at home. They are not only engaged in ploughing, but also in other activities for the entire year. The women folk work for a month or so in a year, and they finally return to the hills when they retire or grow old. This explains the sudden rise in male work force in the last age-group. They return when they have the lowest physical potential to make any noteworthy contribution to work force in the hills. Women work participation is the most when they

manpower is forced to migrate down to cities and towns to earn a livelihood.

Since women do most of the jobs in the hills, they need to be given opportunities for upgrading their skills. Development in human resource ensures better development of physical capital. Therefore women resource development should be given top priority in the developmental schemes meant for the hills and rural areas. It becomes all the more important when we consider the significant role women play in human and rural development. Their involvement in most of the developmental activities forms the backbone of life in the Himalayas.

We must realize that the hills would remain backward till the women folk is backward and illiterate. It is, therefore, of paramount importance that women resource development be planned after giving it a sincere thought. At the first place comes their education, for education has the power to emancipate them from the shackles of superstitions, backwardness and rigidity. Education—practical and vocational in nature—will not only promote their active participation in the developmental schemes run by the government but also make the schemes bear fruits. The success of the schemes will certainly lead to the upliftment

of life in the central Himalayas.

As women have to perform all domestic chores and outside home jobs, they have very little time left with them even to think about themselves. Their priorities include their home, animals, fields--their own self comes in the last. They have neither time, nor energy, nor opportunity in training careers or in self-development.

Women upliftment can only be a success when they are relieved of the drudgery and of their long working hours. What is required in the hills is that things be planned in such a way that fuel, fodder and potable water are made available to the villagers so that women working hours might be reduced. It could provide them time to take better care of their children and pay a bit of attention to themselves.

The general health of women in the hills, especially of the married, is poor. They get no pre- and post-delivery care. They are overworked and under-nourished. This causes many physical ailments to them. A phased nutrition for women programme be launched first in selected areas and gradually covering all the blocks and districts. This programme should also include lessons in personal health and child care.

The energy needs of the villagers can partially be covered in the villages along road side by making cooking gas and kerosene available. It will considerably reduce their dependence on firewood. It is difficult to reach almost all the villages as far as the supply of gas and kerosene is concerned, hence woodfuel would remain the major source of energy in the rural areas for many more years. Aforestation programmes and conservation of existing forests should be carried out through social forestry programmes with the objective that every village comes to have its own forest to meet the energy and fodder needs. The forest departments and social service agencies have a role to play in this direction, seeking the involvement of Mahila Mangal Dals and Yuvak Mangal Dals. Schemes should be prepared for the conservation of natural sources of water, their storage and supply to nearby villages. Water supply schemes also re-

quire a phased programme to cover the villages where there is a drinking water problem.

When we are able to cover a large portion of their basic needs of fuel, fodder and water, the women folk would be freed from their age-old drudgery of roaming to far off places to gather fuel, fodder and to fetch water. It would save their energy and many tiresome working hours.

Women's education should emphasize training in village and cottage industries which have a vast potential in the Himalayan region. The tribal Bhotia women in the districts of Chamoli, Pithoragarh and Uttarkashi have sheep wool and wool products as a flourishing traditional cottage industry. Rural industries like tailoring, knitting, bee-keeping, albino rabbit farming, candle-making, soap-making, collection of medicinal herbs, utility items prepared from 'Ringal' (common name *Baru*; *arundinaria species*), Rambans (*agave species*), 'Bhumal' (*gewia*), 'Bhang' (hemp, cannabis species), Babla (*Bab*, *eriophorum species*) and many other trades can be started in the villages. The selection of training courses should be based on the choices of the village women, the needs of the region and the conditions prevailing there. They need to be motivated in order to part with the traditional pattern of agriculture. Instead, they should be encouraged to start producing vegetable cash crops. The Industries Department, the Horticulture Department and voluntary agencies can arrange for training of the women folk in the desired trades and can extend help and cooperation to them.

It will further be required to set up cooperatives at block levels to purchase and sale of items prepared at the village level.

Our government has initiated many developmental schemes in the Himalayan region. It requires effective implementation, monitoring and, above all, scope for the participation of women folk. It must be borne in mind that the Himalayan region will show signs of development when women resource development is planned and their potential is utilized productively.

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Personality Cult and Disciplinary Practices in the Classroom

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MANY students of today feel alienated from adult society, including their parents and their teachers. They do not find themselves fit in the value systems of their parents and teachers. Some of them are growing up in homes and neighbourhoods where schooling and learning are not highly valued. In some cases the home conditions are such that the caring adults are not available to them. They feel neglected. These conditions make the teacher's role crucial as well as difficult. An efficient and understanding teacher can be expected to be helpful to all the boys and girls in meeting and solving their day-to-day problems of living. In other words, the teacher should present such situations in the classroom as the students' personality cult may be facilitated, leading them to well-adjustment.

Personality Cult

Personality is the concept that refers to the uniqueness of totality of an individual as a social being. He is "a socially perceived entity" (Horrocks, 1969). The main attribute of one's personality is the organization of the psychological systems within oneself as a person. Other attributes in-

clude his reactions to others and others' reactions to him, and his methods of adjusting to his environment. The school's responsibility for helping the individual in his quest for personal development based on health and psychomotor skills, cognitive abilities and academic achievement, adequate means of adjustment and adequate self-control is, thus, intensified under the current rapidly changing conditions.

Freudian psychology treats personality development in terms of three successive levels—the id, the ego, and the super ego. But Loevinger and Wessler (1970) consider only the ego as a useful explanatory construct. They have described seven stages in the development of ego, starting in infancy and extending into adulthood. The attributes of ego development are: (i) ego is stable within each stage, (ii) each individual goes through an invariant sequence of seven qualitatively different stages (i.e. presocial-symbiotic, impulsive, self-protective, conformist, conscientious, autonomous, and integrated); (iii) individuals proceed through the stages at different rates and not all reach the highest stages, (iv) the individual's adjustment and the stage attained are not the same; and (v) stages in ego development can be identified.

How to Foster Personality Development

Klausmeier and Goodwin (1975) have suggested four teacher behaviours for personality development, as follows:

1. Feeling psychologically secure in primary groups is essential for personality development. The teacher should develop an emotionally secure environment.
2. Accepting oneself (adequate self-concept) and others and being accepted by others are interdependent and are necessary for personality development. The teacher should encourage self-understanding and self-acceptance.
3. Attaining independence and a sense of achievement is essential for personality development. The teacher should help students to attain realistic goals.
4. Acquiring rational methods of adjustment to frustrating situations fosters personality development. The teacher should provide practice in meeting with conflict situations.

Disturbances in the Classrooms

Conflict situations, inevitably arising in the classroom and resulting in frustration for both the teacher and the students, disturbs temporarily the favourable interpersonal relations and conducive learning environment. Kooi and Schetuz (1965) suggested a scheme of eighteen separate types of classroom disturbances; these were then consolidated into five categories: physical aggression (the pugilist, e.g. hitting, pushing, bullying); peer affinity (the socializer, e.g. whispering, murmuring without permission); attention seeking (the attention seeker, e.g. passing notes, making wisecracks); challenge of authority (the rebel, e.g. disobeying authority, protesting the amount of work); and critical dissension (the complainer, e.g. making criticisms that are not constructive, laughing so as to disturb others). Serious behaviour problems among in and above high school students include various forms of unrest,

use of dangerous drugs, disorderly conduct, gambling, etc.

The major reasons for such classroom disorders can be many as: dissatisfaction with the curriculum, emotional unrest in relationships with others, vague classroom climate, lack of harmony between classroom control and need of each student for emancipation, and composition of the classroom group. Barnes (1963) reported the causes of student misconduct most frequently mentioned by elementary school teachers as incompetent teachers, differences in student interest, desire for attention by students, different family values, insufficient parental interest, limited intelligence and home background.

Disciplinary Practices

The teacher's primary effort is to create such a classroom environment as to support healthy personality integration and rich learning experiences that may quench the students' curiosity. In doing so he has to take certain disciplinary practices to avoid disturbances inevitably occurring in the classroom. These disciplinary practices can be identified at different levels. Barnes (1963) reported four types of techniques at the elementary level: ignoring the misbehaviour, providing enrichment activities and specialized assistance, reasoning with children, and individualizing school work. Garrison (1959) reported methods of disciplinary control at the high school level: reprimand in front of the class, reprimand in private, detention, assignment to special tasks, sending the students out of the classroom, giving them a special seat, sending them to the principal, and reducing their grades. At the college level handling disciplinary cases is more complex. Many colleges and universities have set up disciplinary committees composed of students and faculty members to adjudicate difficult cases of student misconduct.

Apart from all these as mentioned above, the teacher should take some practical suggestions in dealing with classroom indiscipline: (1) The use of corporal punishment as a disciplinary technique

should be reduced, (2) Appropriate use of reward and punishment should be resorted, (3) Procedures for teaching students to become increasingly self-directive and to learn and practise pro-social behaviour should be explained. The teacher should exercise these disciplinary practices so as to make the students a normal part and parcel of the educational process. If he succeeds in doing so, the classroom will become an appropriate place wherein the students' personality cult will be facilitated and discipline will be well-maintained.

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De-addicting the Drug Addicts

SUNANDA CHANDNA

DRUG addiction has become a serious problem in India. Consumption of drugs is increasing day by day and a large number of young people are getting addicted to them. Recent studies and surveys in the area show that drug addiction is no more confined to the hep and mod of the city elite. The practice has spread deep into society. It is not confined to any identified group, people from all professions of all areas are affected irrespective of caste, colour, economic and territorial barriers. Still the most affected group is that of teenagers, of people who are at the threshold of their life.

Types of Drugs

Different types of drugs which are quite prevalent among the Indian youth are the following:

Opium is a brownish gummy mass and has a characteristic odour and a bitter taste. This drug when taken in excess causes nausea and vomiting. However, it is useful as painkiller. It is used to suppress cough. It reduces the movement of intestine, thus making it an excellent drug for the treatment of diarrhoea. It has a depressant after-effect which suppresses fear, hunger, thirst and sexual urge. Opium is either smoked or its vapours are inhaled.

The initial withdrawal symptoms include running of the nose, watering eyes, severe perspiration, uneasiness, colicky pain in the abdomen and diarrhoea. These symptoms appear as early as six to eight hours after the last dose. The severity and the nature of the withdrawal symptoms depend on the amount and duration of the drug consumption.

Heroin is a greenish white or brownish white powder marketed in small glass vials or in packs called poodis. This powder is dissolved in water by heating. The liquid is then injected into the vein of the forearm. Heroin is also inhaled by rolling it in a cigarette and it is heated in an aluminium foil and 'chased'.

It has a sedative and analgesic effect on the abuser. It helps in diminishing physical and mental pain. The initial reaction is unpleasant and causes nausea and vomiting. But the abusers become calm, inattentive and suffer from slow pulse and respiration. If the drug is taken in excess, it may lead the abuser into a coma which finally results in death as there is respiratory failure. A marked apathy, listlessness and inertia prevent the abuser or drug addict from working normally and caring about his bodily needs. Addiction to brown sugar takes only three to four days.

Amphetamines is another kind of drug widely used by students, doctors and housewives. It is in

jected directly into veins as it gives a great feeling like 'Superman'.

Dexedrine another derivative of amphetamine which is also called speed. It acts as a stimulant. Students abuse it to keep themselves awake at the time of examinations and athletes consume it to improve their stamina and performance.

The addicts of this drug show the following symptoms: high blood pressure, dilated pupils, unclear vision, incoherent speech, profuse sweating, tremors, excitability, confusion and sleeplessness. When kept away from the drug, the withdrawal effects like weariness with profound depression, reaching its peak in 48 to 72 hours and may last for several days to weeks requiring hospitalisation and prolonged treatment

Barbiturates are sedative and hypnotic drugs. They are popularly known as suicide drugs. In small doses these substances reduce nervous and muscular tension and anxiety and in larger doses they produce sleep and lethargy.

Barbiturate addiction is peculiar as it brings about social and personal deterioration very slowly with the addict maintaining a reasonable facade of normality. Barbiturates lead to physical and psychological withdrawal symptoms. There is often clouding of consciousness, confusion and the individual forgets how much he has actually consumed.

Marijuana or grass is a mixture of crushed leaves, flowers and twigs of *Cannabis sativa*. Marijuana produces effects like increase in heart beat rate, lowering of blood pressure, impaired speech, blurred vision, reddening of eyes, nausea, impaired thinking, drowsiness. In low doses it causes hallucinations, both pleasant and terrifying. In larger doses, this drug induces bizarre behaviour and highly distorted visual, auditory and perceptual effects.

Hashish is a dark tarry concentrated resin found in the *Cannabis sativa*. It is mixed with tobacco and smoked.

Cocaine initiates restlessness, anxiety, over-excitability, irritability and paranoid feelings. Its frequent use leads to skin irritation and itchiness.

LSD makes the person restless, dizzy followed by a mild delirium.

These are some of the drugs which are used on a wide scale by students in India.

Unless people are educated on the consequences of drug addiction, the wide-spread abuse of drugs cannot be checked. The teachers and the parents can play a very great role in this regard. But the main point is how to know that the child is getting addicted to drugs.

Specifics to be Looked for

If you suspect that the child is experimenting with drugs, watch him/her closely for several days. Here are some specifics to look for

1. A tendency to sit for considerable periods of time just looking off into space.
2. Laughing excessively at things that are funny only to him, but may be offensive to others.
3. An appearance of intoxication with no odour of alcohol.
4. Staying out later than usual and giving evasive answers when questioned about places visited and companions.
5. Avoid reading about things connected with the drug culture, either legal or illegal.
6. Loss of appetite, perhaps with rapid loss of weight.
7. The reverse—an increase in appetite with frequent and wild forays on the cupboard and refrigerator. However, these may also be symptoms of other physical or emotional difficulties, so don't panic too soon.
8. Make a close inspection of the young person's eyes. For example, one give away may be a fluctuation on the width of the pupils not accounted for by changes in the intensity of life.

If the above-mentioned symptoms are evident in some child, then it becomes the duty of the teachers and the parents to take certain preventive measures.

Preventive Measures

1. Have frank, open and unforced family dis-

cussions about drugs. Your children probably have opinions on the subject, and they may be able to tell you more about the drug scene than you or some of the authorities known.

Remember, alcohol, nicotine, caffeine, tranquilizers and other prescription and non-prescription medications are drugs. To try to conceal or ignore your own use of drugs will serve only to undermine your credibility. Be willing to listen and to admit your own human failing while trying to find common perspectives to work from.

2. Keep the whole drug scene in perspective. A good general rule is that drugs are not necessary for a normal, healthy person. Whenever anyone uses drugs merely for the pleasure to be derived from them, he or she is in danger.
3. Realize your importance as a role model for your child's behaviour. Perhaps you need to mend your ways. Be willing to admit that your child may have become involved with drugs, but avoid building a guilt complex for yourself. Not every youth problem is the result of parental failure.
4. Let your child know that you have confidence in his increasing ability to make decisions for himself. Teach him to form attitudes and conclusions based on facts. Help him to form a value system. Recognize that the most you can do for him is to give him the opportunities to make sound decisions now, and that he will benefit from right decisions but suffer the consequences from bad ones.
5. Keep informed on the issues and major research regarding drug abuse. Give active personal support and aid to local community drug-abuse programmes and projects, particularly those that get to the heart of the problem-changing motives and offering alternatives. You cannot tackle your community's problem single-handedly, so you must use common sense,

but do get involved. More and more communities are organizing parent support groups to help young people.

6. If you think your child is experimenting with drugs, do not panic or throw him out of the house. Do not treat your child like a criminal, communicate on a person to person basis. You may find it necessary to establish new rules, but make sure that they are fair, and talk over the reasons for them. Strive to develop trust-communication and understanding within the family.
7. Offer the child positive alternative to a drug life style. That may mean that you and whole family have to take time from other activities to enjoy one another's company. Do not expect merely to hand your child a list of activities and think you have accomplished your goal.

If we are to cope with our children's exposure to and possible involvement with drug, it becomes quite essential that we ourselves remain calm and quiet, and do not get panic and lose self-control. We need to remember the following:

1. Do not let sensationalized propaganda from either the news media or uninformed sources override your common sense. Consider the sources of information and evaluate what authority they carry in relation to your previous knowledge and current research findings.
2. Do not allow the whole issue to degenerate into an argument with your child about legal aspects. Emphasize to him the possible personal effects of drug use, both short- and long-term. Discussion about drugs is not the same as discussion about the generation gap, ecology, rock music, or politics, although there can be relationships to any or all of these subjects. Do not get trapped into automatically relating these separate subjects to drugs—or into an argument that avoids the central issue.
3. Do not hit your child over the head with a verbal sledgehammer. You will likely lose his trust, and there are more effective

ways to deal with the situation.

4. Do not lose your temper or composure. Remain calm, in this way you can think and talk more realistically and persuasively.

The teachers and parents can seek the following services as well:

1. Voluntary agencies and committees like 'Sanjivini', Saheli, which have sprung up to monitor the drug problem in local areas.
2. Rehabilitation camps and centres have been put up for the treatment of drug addiction.
3. Films and audio-visual aids can be shown to students, especially teenagers, in order to make them aware of the bad effects that

drugs and drug addiction have on human

4. Counsellors, trained teachers and social workers can be invited to give talks on the subject.

In summary, the drug problem is not a simple one with simple solutions. Jailing drug pushers, treating drug abusers, educating school children, restricting drugs, legalizing drugs—all these approaches have been tried at various times, and each approach has merit under specific circumstances. However, the ultimate solutions must come not only from society and its interaction but also, and more fundamentally, from our providing our children with more understanding and sympathy, and working with them to develop a value system that will bring the greatest good in this life and prepare them for the life to come.

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